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Back Track

RECORDING BRITAIN'S RAILWAY HISTORY

GWR cult under threat from LMS?

OUR READER SURVEY TELLS ALL. SEE p53.

Atlantic

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by Derek Huntriss

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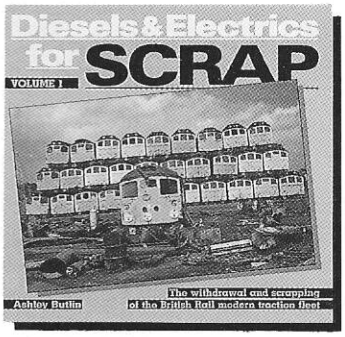
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VISA

BackTrack

RECORDING BRITAIN'S RAILWAY HISTORY

Vol.2 No.2 Summer 1988

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BACKTRACK READER SURVEY

The average BACKTRACK reader is 46 years old. This statistic is not as useless as it sounds — it is, for a start, reassuring to me personally to know that I am (more or less) in the age group most likely to identify with the majority of the magazine's readers.

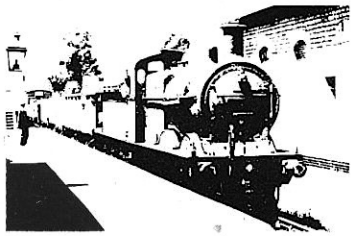
But the figure also suggests that at least half of us belong to a generation to whom rock 'n' roll may have been as compulsive as railways themselves. To us, particularly, a 'Top Twenty' chart is an object of great fascination. And in this issue, we publish one.

The same recent survey of our readers which gave us their average age has also revealed Britain's 'Top Twenty' most popular railway companies and these are published on p.53.

Our survey, consisting of nine questions probing readers' railway interests, was forwarded to 2,200 BACKTRACK subscribers. Over 90% responded — an astonishingly high percentage — and I extend my thanks to all who did. The first 1,000 questionnaires received back at our offices were analysed for our survey. BACKTRACK is a truly national magazine and the responses were well balanced geographically. The size of sample was equivalent to similar polls carried out by MORI or Gallup, which regularly accurately predict the outcome of general elections. Treated with care, therefore, I believe our poll results are reliable and can form the basis for meaningful analysis.

The poll's major finding is the surprising shortfall in interest in the GWR. Swindon devotees may see the highlighting of this as evidence of anti-GWR bias on our part, but it isn't. We emphasise this aspect because it is of great significance. For decades, it has been widely accepted that the GWR is 'two or three times' as popular as any other British railway company. Whether this was ever true or not, it certainly isn't now. While the GWR still leads all the rest as a *company*, as a *group* it is well behind the LMS group in overall popularity — a fact which will surprise many.

And if the average BACKTRACK reader is only 46, how refreshing and encouraging to find such solid support for the pre-grouping era, and not just from the older age groups. How many of the plethora of BR-era picture books, based on the well-worn premise that enthusiasts only want to be reminded of things they remember personally, could better be replaced with material from the



1890-1920 period?

If such a 'Top Twenty' as this has been published before, I am not aware of it. Such surveys may be useful and they may be fun, but their long-term benefit in terms of response by societies, publishers and model manufacturers will be slight unless they are used as a basis for discussion.

The percentage of BACKTRACK readers who responded to our questionnaire was fully representative, but it was small. If the response to this limited survey is generally favourable, we'd like to repeat the exercise on a much wider basis, with *all* our readers invited to take part. We'd like to ask a lot of questions about what you, the railway enthusiast, like and dislike, what you want and don't want.

Certainly, railway publishing is at a crossroads. While some publishers are thriving, book and magazine sales generally are falling. Too much is being published. Too much misses its targets. The gap between publisher and reader has never been as wide. If it isn't narrowed, our hobby will continue to suffer.

Surveys and polls give *you* the chance to influence what's being done on your behalf. Do you want more? Let us know. □

Nigel Trevena

NEXT ISSUE ON SALE 7th July 1988

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Atlantic

Engineering expertise, an unshakeable sense of identity and deep rooted tradition have all sustained the Great Western legend, and each of these strengths is symbolised in this 1950s portrait of 4-6-0 7037, the last Castle. For many years it has been universally accepted that the GWR has a much greater popular following than any other railway company. All available evidence has supported the theory.

But BACKTRACK's recent major reader survey indicates that, while the GWR is still the most popular single *company,* **the LMS** *group* **now outstrips the Swindon company by a substantial margin in the esteem of Britain's enthusiasts. And** *that* **will cause a few arguments.** Photo: P. M. Alexander/Millbrook House Collection

NIGEL TREVENA
analyses the sometimes surprising results of a major BACKTRACK reader survey

Our reader survey reveals

BRITAIN'S MOST POPULAR RAILWAYS

OVER 150 YEARS AFTER ITS formation and four decades after it ceased to exist, the Great Western Railway is still Britain's most esteemed railway company. But it is being closely challenged in popularity by the LMS; indeed, if support for their pre-grouping constituents is added to that for the GWR and LMS *proper*, then the LMS group is now more popular than the GWR.

There is also surprisingly strong interest in the pre-grouping era on a national basis, with solid support for the major independent companies. Most popular of them all is the Somerset & Dorset.

THESE ARE THE MAJOR FINDINGS of a recent survey of 1,000 BACKTRACK subscribers, who were invited to answer nine questions relating to their railway interests. The individual responses must (for all kinds of reasons) remain confidential, but as the questionnaires came in, it became increasingly clear to us that the replies to question 2 — "What is your favourite railway company" — were revealing attitudes useful in the study of railway history as well as the production of books and models. In this feature, then, we are publishing the 'Top Twenty' most popular British railway companies, as defined in our survey.

Conscious that there are 'lies, damned lies and statistics', what can we make of these results? The answer, in my view, is quite a lot. There are surely two key elements: the popularity of the GWR, and the interest in the pre-grouping era.

At first glance, the position of the Great Western seems unassailable. It polled 27% of the total vote, against 22% for the LMS, with 14% and 12% going to the LNER and SR, respectively. Our result *appears* to do no more than confirm what has been widely recognised throughout the post-1968 boom in interest in our historic railways — that the GWR is far and away the most popular.

But when we consider support for the pre-grouping constituents of the 'Big Four', the overall picture looks intriguingly different. Where is the support for the constituents of the GWR? It appears to be non-existent. If there *are* enthusiasts who find unrivalled stimulation in the study of, say, the Burry Port and Gwendraeth Valley Railway, they have not responded to our survey. Of the 22 independents taken over by the GWR at and around the grouping, not one makes the 'Top Twenty'. Indeed, only the Cambrian polled any votes at all. Two.

This is perhaps unsurprising. For although the GWR absorbed more companies at grouping than any other of the 'Big Four' it was merely picking up the crumbs; it had already swallowed most lines of significance in its sphere of influence. In 1923 it gained no company of the stature of, say, the LNWR or GER. And, as ever, Swindon did not just 'take over' a company — the word 'absorbed' has no substitute here. The hapless independent's character was, to a greater or lesser extent, compromised to conform to the Swindon pattern. The disparate character of the LMS, LNER and SR after grouping has no parallel on the GWR. Its character was fully formed much earlier.

To those who admire the 'Swindon way' its corporate strength and standardisation are appealing beyond compare. To others, to whom variety and diversity are more important, all GWR artifacts 'look the same'.

ANALYSIS OF THE FIGURES IN our survey suggest that, today, the very strengths of the Great Western, as suggested above, may be becoming something of a liability, to some enthusiasts at least. For the company's popularity is under serious threat. The reason? A burgeoning (and, I suspect, largely underestimated) interest in the pre-grouping companies. And here, the LMS is scoring heavily. Look at the support for the pre-grouping companies from which it was constituted: LNWR and MR 26 votes each; L&Y 15; Caledonian 9; G&SW 7; LT&S 4. Then there is the S&D, worked jointly with the SR, 28 votes — say, 14 to the LMS. Add these votes, 101 in all, to the total, 247, for the LMS 'proper' and the LMS *group* polls 348 votes — substantially ahead of the GWR *group's* 310.

Is this arithmatic meaningful? Is it realistic to credit the LMS group with more popularity than the GWR, based on proven interest in the former's constituents? I believe it is. For the LMS, after all, was formed entirely from independents; it did not exist before grouping, as the GWR did. The LMS was multifaceted right to the end of the steam era. Can we seriously believe that an LMS enthusiast will take no interest in the Settle & Carlisle line because it was built by the Midland?

If, then, we accept that the LMS (as a group of companies) is now by a wide

Britain's TOP TWENTY most popular railway companies

1	GREAT WESTERN	310
2	LONDON MIDLAND & SCOTTISH	247
3	LONDON & NORTH EASTERN	164
4	SOUTHERN	139
5	BRITISH RAILWAYS	32
6	SOMERSET & DORSET	28
7=	LONDON & NORTH WESTERN	26
	MIDLAND	26
9	GREAT EASTERN	25
10	GREAT CENTRAL	24
11	NORTH EASTERN	20
12	LONDON & SOUTH WESTERN	18
13	LANCASHIRE & YORKSHIRE	15
14	GREAT NORTHERN	12
15=	LONDON BRIGHTON & SOUTH COAST	9
	CALEDONIAN	9
17	NORTH BRITISH	8
18	GLASGOW & SOUTH WESTERN	7
19	MIDLAND & GREAT NORTHERN	5
20=	GREAT NORTH OF SCOTLAND	4
	LONDON TILBURY & SOUTHEND	4
	SEVERN VALLEY	4

2,600 BACKTRACK subscribers were sent a 9-point questionnaire and the first 1,000 returned were analysed for this survey. A total of 1,136 'votes' was accrued, some readers listing more than one company as 'favourite', others making no specific choice at all. Date of survey: December 1987. Average age of respondents: 46.

margin more popular than the GWR, should we take note? The answer must be, yes; for it is surely evidence of a sea-change in our hobby.

LMS & constituents	348
GWR & constituents	310
LNER & constituents	262
SR & constituents	180

For years past, anyone involved with railway enthusiasm in an executive capacity — as publisher, author, preservationist or model manufacturer — has testified that you can sell 'three or four' GWR products for every two LMS (or one LNER or SR). The success of whole companies has been founded on perpetuating the Swindon legend. Shelves everywhere groan with Western memorabilia. And this, surely, is unhelpful. Many publications (especially briefly captioned picture books) have increased the familiarity of the GWR without enhancing our understanding of it. There is no surer way to throttle enthusiasm or turn it elsewhere.

It would be folly to suggest that the GWR is not still hugely popular or that products based on it do not sell well. But in our survey the backlash has begun — a small but significant anti-GWR vote: comments that the respondent likes 'anything but the GWR' or that 'there's too much on Swindon'. No one made similar comments about any other company.

As enthusiasts, we seem to be changing. Once, perhaps, we were satisfied to be reminded of things we once knew and admired. Now, increasingly, we appear to want to be told something we *didn't* know, perhaps about a railway company we had previously ignored. If this attitude is increasing, it seems to be the LMS that is gaining the most from it. In 1988, it is the company to watch.

TURNING NOW TO THE LNER, AT number 3, we find a similar picture to the LMS, but on a more modest scale. The LNER, too, gains popularity from support for its constituents, of which the Great Eastern is the most esteemed, closely followed by the GCR and NER with the GNR some way behind. As a *company* the LNER is only half as popular as the GWR, but its impecunious nature, which rendered it quite unfit to impose standardisation on its ramshackle empire, ensured the very diversity of interest which makes its overall *group* popularity much greater.

The Southern has long lagged behind in popularity. This is unjust, surely, for it was a great innovator. Perhaps the electrified suburban lines fail to inspire. Possibly the population of the southeast, predominantly urban and largely transient, lacks the sense of community which can fire enthusiasm for local lines. Certainly, the SR had no Shap, no Ribblehead, no Tay Bridge. Its railways had charm, at times, but no grandeur. And the group was, of course, the smallest of the 'Big Four'.

Of the SR constituents, only the LSWR makes a strong showing, outstripping all the others put together. Its popularity is, perhaps, based on its locomotives, although the cult of the 'Withered Arm' doubtless helps. The SECR polled just two votes.

A major gap now, to British Railways standing at number 5 with just 32 votes. This seems a surprisingly low figure — many pundits cite the BR steam era as the most popular of the lot. Our total does, in fact, require qualification. Some respondents listed their favourite company as 'GWR/WR', for example, or simply WR. In such cases we felt it appropriate to include *both* in the GWR total, because so little changed after nationalisation. I suspect, in fact, that many people voting for a 'Big Four' company are in fact remembering its respective BR region. Nevertheless, 32 votes went to British Railways as a national concern, with, presumably, implied interest in non-steam traction too. British Rail, incidentally, failed to accrue a single vote.

WE COME NOW TO THE independents. The totals polled by each railway are comparatively small and closely matched. They therefore require careful analysis and the precise order of the leading companies must be open to dispute. However, one statistic is unshakeable — a total of 240 votes for

Pre-grouping elegance in the BR era — T9 30729 at Brockenhurst on 8th September 1953. Photo: R. C. Riley

No line has been better portrayed photographically than the S&D, and Ivo Peters' work has achieved classic status. This is his view of 2P 40568 and WC Pacific 34044 *Woolacombe* at the south end of Combe Down Tunnel on 21st August 1954.

the pre-grouping era as a whole (about the same as polled by the LMS) reveals a healthy and encouraging interest in the earlier years. Publishers and model manufacturers take note.

'Big Four' companies	860
Pre-grouping companies	240
British Railways	32
Preservation	4

Leading the pre-grouping pack is the Somerset & Dorset. What on earth are we to make of this line? And to most of us, it *is* a line, not a company. We do not think of a works, or a family of engines or their CME, as we do with other railways. We think of the portal of Devonshire Tunnel, the climb over the Mendips and the mists over Binegar. We idolise a *route*. And that makes the S&D unique in our survey.

But why does it fascinate? It was a useful cross country line, but hardly unique in that. It was worked by a plethora of loco types of varied 'Big Four' origins which would be expected to dissipate identity rather than enforce it. And yet, by a measurable margin, the S&D commands more devotion than such mighty undertakings as the GCR, NER or LSWR, whose claims to historical significance it cannot hope to equal. Perhaps the best way to understand why the S&D is Britain's most popular pre-grouping railway, and the sixth most esteemed of all, is to remember that our hobby is founded not on statistic, not on theory, but on emotion. At that point, further analysis becomes pointless.

Devotees of the 15 other pre-grouping railways will draw some satisfaction, or otherwise, from the apparent popularity of their favourites. The strong English bias in the results is partially offset by fair support for Scottish companies, but the Welsh independents fare badly. Not one reader cited a narrow gauge concern as their favourite. Eleven companies polled one, two or three votes: CLC, Cambrian, Furness, Highland, Hull & Barnsley, LT, Metropolitan, MSWJ, North Staffs, SECR, S&M.

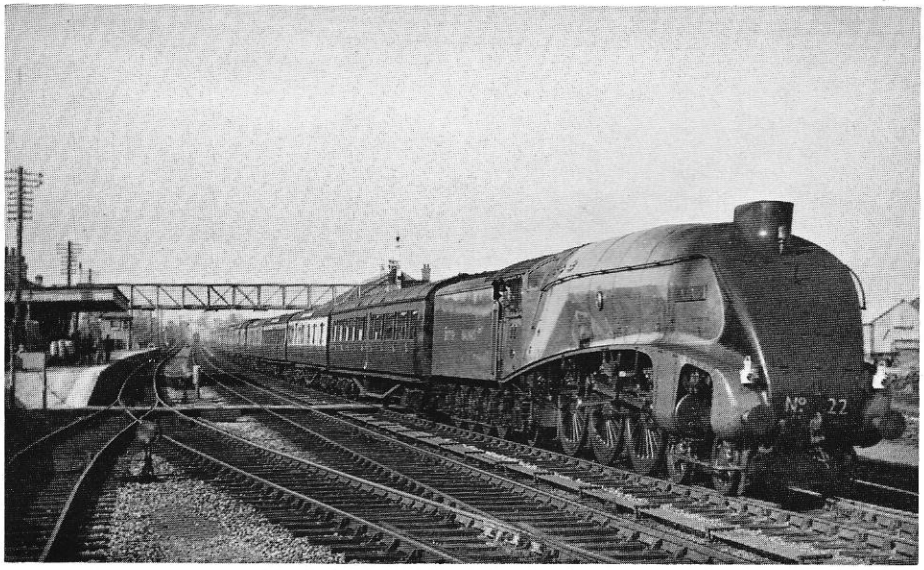
Three preserved railways received support. The Severn Valley Railway's appearance in the 'Top Twenty' is a credit to its volunteers and a reminder that our tourist railways are creating their own history rather than perpetuating that of their illustrious forebears. The Mid-Hants (2) and K&ESR (1) also polled votes.

CONCLUSIONS? FIRSTLY, THAT inter-company barriers are not rigid. One in three participants in our survey listed more than one railway as their favourite, or indicated 'any' or 'no preference'.

Secondly, the Great Western's domination of the railway hobby seems to be on the wane, with the LMS group now more popular. And third, interest in the earlier years is solid, with one in five respondents listing a pre-grouping company amongst their favourites.

Those wishing to translate the survey totals into a national picture should note that the number of people with more than a passing interest in railways in Britain has been estimated at 2 million. This figure is believed to have originated with a national newspaper, but that fact need not deter us too much. If it is accepted as broadly correct, national figures for the individual companies can be gained by multiplying our survey totals by 2000.

Are surveys like this a good idea? Let us know what you think. □



As with the Southern, much of the LNER's popularity must be founded on their Pacifics, and this is the most famous of them all. *Mallard*, passing Cullompton station, WR, on 26th April 1948 during the Locomotive Exchanges. Photo: Atlantic collection

G. F. BANNISTER *chronicles the life and times of the*
MONTGOMERYSHIRE RAILWAY *whose unspectacular rural existence was*
transformed by the military

Memories of the S&M

Plans for a through railway from the Midlands to the Welsh coast exercised the minds of Victorian promoters in the period of 'Railway Mania' and as a natural focus and gateway for entry into Mid-Wales, Shrewsbury and the Severn lowland to the west figured largely in their plans. The disproportionate costs of construction set against traffic potential involved a very high degree of risk and the building of such a line through the sparsely populated counties of Shropshire and Central Wales invited failure unless the development of a through route could be guaranteed, as evidenced by the inability of the Manchester & Milford Railway to complete their line from Llangurig to Strata Florida in the 1860s.

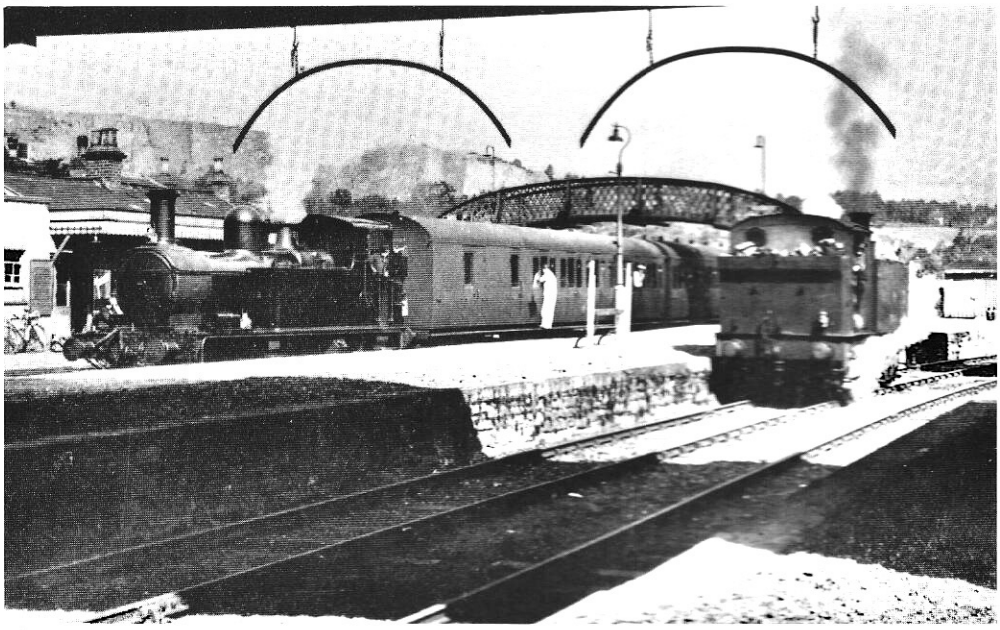
In 1860 two great railway companies, the GWR and LNWR, dominated the railway network around Shrewsbury. By 1865 access to the Welsh coast at Aberystwyth was obtained by joint ownership of the line to Cefn (later Buttington Junction) near Welshpool and thence over the Cambrian main line for through carriages. An abortive attempt to create another route to the coast had appeared in 1860 in the form of a prospectus for the West Midland, Shrewsbury & Coast of Wales Railway. This bold venture would have linked Shrewsbury with Portmadoc by way of Kinnerley, Porthywaen and the Tanat valley to Llandrillo, involving the construction of a prodigious tunnel under the Berwyn Mountains. It illustrates the desperate attempts to obtain a second and more competitive route to Ireland, it being hoped to establish a packet station at Porthdinlleyn near Nevin on the Lleyn peninsula, important enough to vie with Holyhead.

Sparse population, lack of local support and extremely costly engineering works effectively killed off the project and the idea lay dormant until 1863 when Parliament granted assent for the construction of the West Shropshire Mineral Railway from Llanymynech to Shrewsbury, facilitating the carriage of large quantities of lime and stone for distribution from the latter place. A new station had to be built at Abbey Foregate due to the antagonistic attitudes taken by the GW and LNW companies who refused the new undertaking access to the General Station in Shrewsbury. With further aspirations in mind the company was renamed Shrewsbury & North Wales Railway and the twenty mile length of main line extended to Llanyblodwell, opening up large limestone quarries at Nantmawr and Porthywaen. A further extension included a six mile branch from Kinnerley to Criggion thus gaining access to the Ceiriog Quarries at the base of the Breidden Hills, a rich source of valuable green basalt. The whole system was duly constructed and worked.

Even with hindsight it is difficult to imagine how the promoters of the new railway hoped to profit for the only town on the route was Llanymynech with scarcely one thousand inhabitants. However, it soon became apparent that the new company was only to form part of a much more ambitious undertaking when amalgamation took place with the Potteries and Shrewsbury Junction Railway which was itself trying to obtain powers to connect Shrewsbury with Stoke on Trent by way of Market Drayton. The new company was to bear the impressive title of the Potteries, Shrewsbury & North Wales Junction Railway and held the same aspirations as the West Midland, Shrewsbury & Coast of Wales — to reach Portmadoc, again seriously threatening the monopoly of the GWR and LNWR.

The 23 miles from Shrewsbury to Llanyblodwell were completed and the line opened for traffic in 1866 but totally inadequate funding aborted the grand dream of reaching the Welsh coast and the PS&NWR came to an ignominious end in the quarry at Nantmawr. Operations struggled on for twelve years, of which only three were marginally profitable, an absurd return on investment costs of £1½ million. By the year 1872 staffing levels had been cut to a minimum and the line singled. In the end neglect and decaying infrastructure forced the Board of Trade to close the line in 1880. The bitter truth of the whole unhappy affair lay largely in the fact that the aims and construction of the 'Potts' came too late in the field of major railway development, and were aggravated by adverse costs of considerable engineering work needed on the Welsh extension.

In 1888 a new company raised local hopes for a reincarnation of the line and further construction towards Market Drayton. Alas, the Shropshire Railways Company ran into inevitable financial difficulties in 1891 and the whole system was to lie derelict for another twenty years, except for the Blodwell extension to Nantmawr which was leased and worked by the Cambrian Railways, never becoming part of the Shropshire & Montgomeryshire Railway.

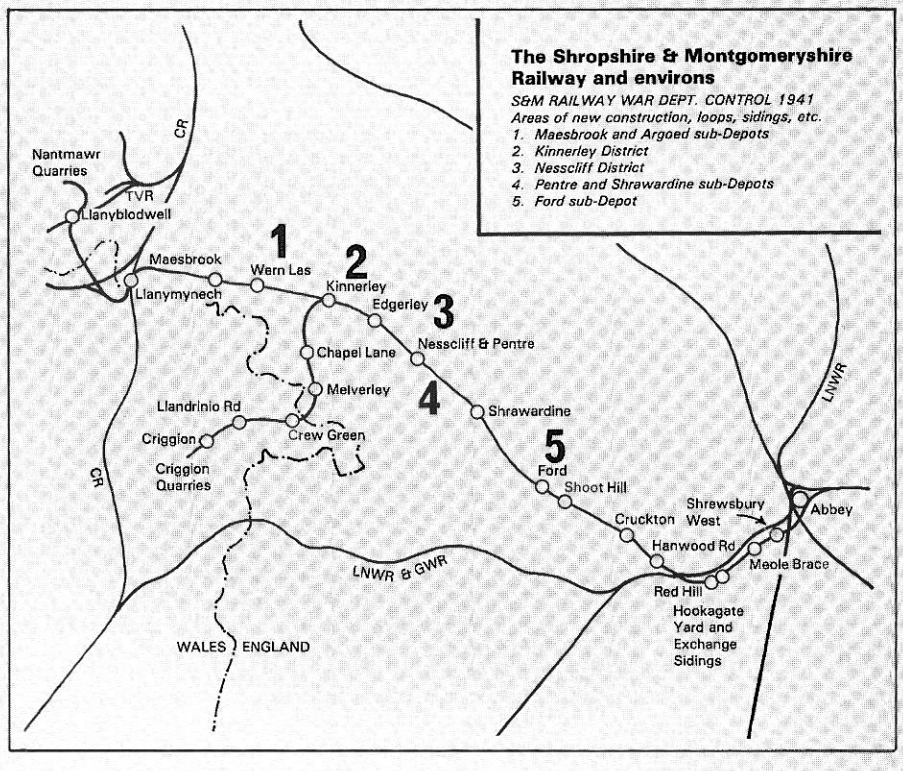


Llanymynech served both the S&MR and the GWR (former Cambrian Railways) physically connected by a common island platform. In this 26th August 1946 view GWR 0-4-2T 4812 arrives with the Llanfyllin branch train while standing in the S&M up platform is War Dept 0-6-0T 70084, formerly Great Eastern Railway 388 and later to become LNER 7388. Photo: W. A. Camwell

he S&MLR represented the final expression of railway working across the Severn lowland, and a much more modest affair at that. By now it would appear that the failure of previous ventures would have deterred further activity in the area but as early as 1900 local agitation for a railway service grew apace and support for a new scheme was enthusiastic. In 1911 this crystallised into the S&MLR. The new company was formed in 1909 under the provisions of the Light Railway Act of 1896 and was directed by Colonel Holman F. Stephens, that indefatigable protagonist of the light railway. The aspirations were less venturesome than any of the preceding schemes and under the terms of the Light Railway Act many previous restrictions did not apply. The abandoned 'Potts' was secured on easy terms, £32,000 of capital quickly raised and construction of the new line put in hand. Public traffic from Shrewsbury to Llanymynech commenced on 13th April 1911 and to Criggion in 1912.

In some respects the S&MLR proved even more unfortunate than its predecessor — economic reasons over which it had no control. The line traversed essentially agricultural and pastoral lowland with small rural settlements and widespread farming communities. Road competition became increasingly more threatening, and although the new line had a greater number of stations than in 1870 revenue was a constant anxiety for many of the stations were situated at road crossings or lay at some distance from the villages bearing their names. No small wonder that as more direct road carrier services developed the railway lost much of its influence, except for transporting bulky material over longer distances.

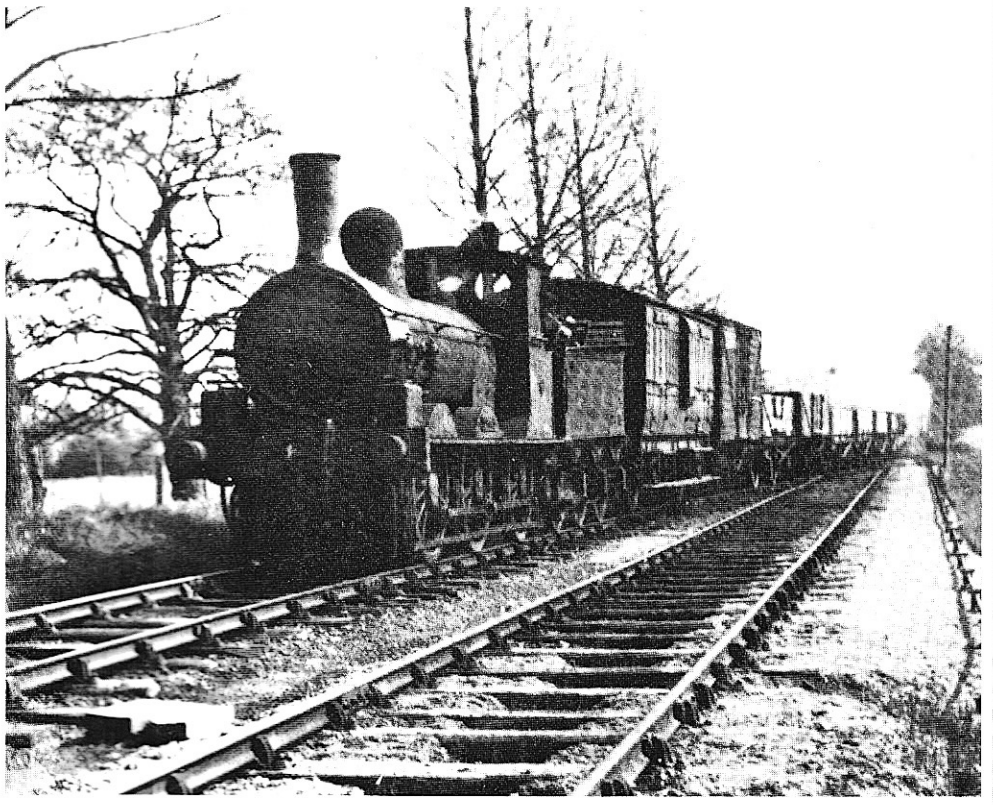
The mid-1930s signalled the end of working in profit. A most lucrative roadstone contract with the British Quarrying Company at Criggion, which saw the carriage of over 140,000 tons of crushed stone along the S&MR in 1931 for construction of the East Lancashire Road Scheme, had allowed the railway to keep its head above water when other traffic was both meagre and steadily waning in the face of inevitable road competition. However, 1931 was to be the last year when net receipts exceeded expenditure on the railway although a very modest £95 was made in 1935. In his excellent pioneering book on the line, originally written in 1949, Eric Tonks' succinct summary said it all, "until 1939 the S&M could only be regarded as a cross country route whose chief function was the carriage of stone from the quarries at its terminus. Upon this traffic the fate of the railway hung and any reduction below a minimal supply ruled the line out as an economic proposition".



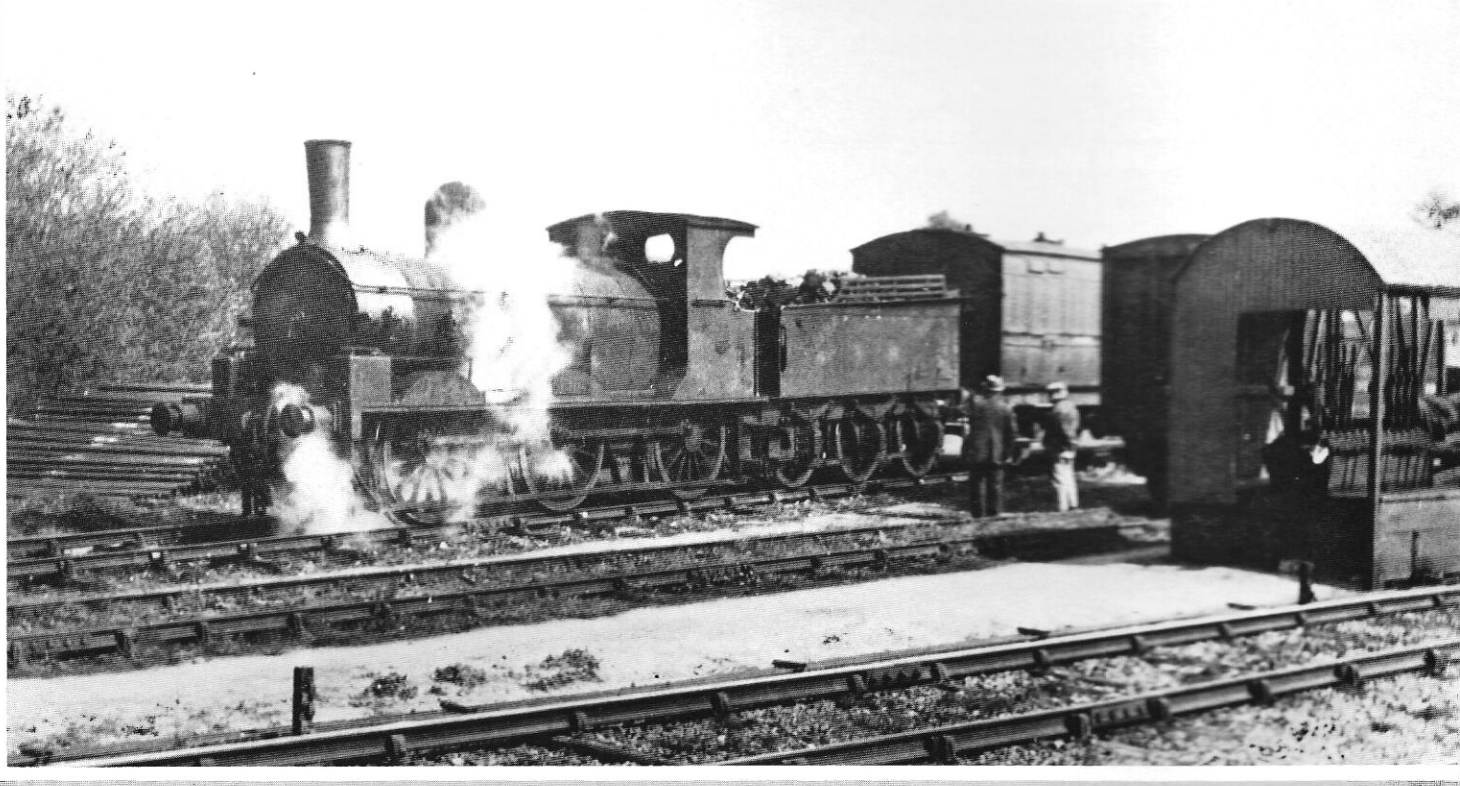
The Shropshire & Montgomeryshire Railway and environs

S&M RAILWAY WAR DEPT. CONTROL 1941
Areas of new construction, loops, sidings, etc.
1. *Maesbrook and Argoed sub-Depots*
2. *Kinnerley District*
3. *Nesscliff District*
4. *Pentre and Shrawardine sub-Depots*
5. *Ford sub-Depot*

Shropshire & Montgomeryshire Railway 0-6-0 3 *Hesperus* (ex-LSWR Ilfracombe Goods engine) runs 'wrong line' into Kinnerley Junction with the 10.15 am Shrewsbury Abbey to Llanymynech daily train on 11th April 1938, working under 'one engine in steam' regulations. Behind the ex-Midland brake van lies a goodly rake of empty stone wagons destined for the British Quarrying Company at Criggion. Photo: the late R. K. Cope



et us consider some of the geographical and economic factors that influenced this 25 mile long line, which employed a staff of just over seventy people in the early 1930s. An analysis of the available passenger traffic data in Company records indicates that travel was almost entirely localised. As a general rule only one or two per cent of the total number of people carried did not originate from stations on the company's system and the line never did carry what may be described as through traffic from the Llanymynech end. In spite of notice board entreaties at Llanymynech that the line was the "SHORTEST ROUTE TO SHREWSBURY" the good people of the Welsh borderland and Llanfyllin



Shropshire & Montgomeryshire Railway 0-6-0 3 *Hesperus* (ex-LSWR Ilfracombe Goods) shunts the up sidings at Kinnerley Junction on 11th April 1938 while working the 10.15 am Shrewsbury Abbey to Llanymynech daily goods train. Note the 13 lever Tyers ground frame and its rudimentary shelter at the end of the platform.
Photo: the late R. K. Cope

area preferred the more roundabout journey by way of Oswestry and Gobowen which offered greater comfort, not subjected to the agonies of mixed train working and intermediate shunting at most stations with a tail of heavy stone wagons in the consist of the train. At times, Saturday traffic was quite considerable for besides necessary shopping and visits to the market, Shrewsbury had much to offer in the way of entertainment.

The problem of lost passenger revenue began in 1925 when a Saturday bus service commenced operations between Kinnerley and Shrewsbury operated by Messrs Vagg & Co of Knockin Heath; the route via Pentre netted an estimated 150 passengers per Saturday, mostly drawn from S&M regulars. Worse was to come in 1931 when the bus company expanded into a daily service of four return trips between Llanymynech and Shrewsbury. It was direct competition and the buses carried 400-500 passengers per week thereby bleeding the S&M to death. Failing to buy out the bus company, the S&M slashed the return rail fare to Shrewsbury to sixpence (2½p) with the offer of free cartage for produce to the market. To grind salt into the S&M's wounds it is salutary to record that the buses carried over 50,000 passengers between Shrewsbury and Llanymynech during the financial year 1948-9, far in excess of numbers carried by the railway even in its heyday.

As originally intended in the provisions of the Light Railway Act a major share of S&M traffic was devoted to agriculture and livestock. Typical of most of the system's stations was Ford & Crossgates which despatched 1,549 tons of wheat, barley, potatoes and damsons in the 1946-7 period. At the same time, 1,574 tons of inward traffic covered general merchandise, coal, fertilisers, lime and basic slag. Shropshire's Allscott Sugar Factory opened in 1927 and in twenty one years up to 1948 over 27,000 tons of sugar beet was transported over the S&M system utilising all stations with loading facilities but excluding those on the branch to Criggion.

Although livestock traffic had more or less ceased by 1934 (with the exception of pigs), 14,255 animals had travelled by train to the Oswestry and Shrewsbury markets during 1927 alone. Between 1915 and 1925 milk was an extremely important commodity loaded at Nesscliff, Ford, Shrawardine, Kinnerley, Wern Las and Maesbrook, but by 1927 carriage of milk to destinations as far away as Liverpool, Manchester and Birmingham had ceased.

Totally dominating the S&M traffic pattern for the last twenty five years

SHROPSHIRE & MONTGOMERYSHIRE RAILWAY.
Sugar Beet. Urgent.
Date ..... 192 ...
From .....
Sender's Full Name
TO .....
VIA .....
Wagon No. .....
Consignee .....
Contract No. .....

Shropshire & Montgomeryshire Railway.
No. 2090 Station. 191
Received on Account of the Shropshire & Montgomeryshire Railway the sum of £

Shropshire and Montgomeryshire Railway.
Date ..... 193...
From CRIGGION.
To .....
Via .....
Owner & No. of Wagon .....
Consignee .....
A2

Shropshire & Montgomeryshire Rly.
CHEAP EXCURSION TRAIN
Will run from SHREWSBURY (Abbey Station) every THURSDAY, until further notice, to the following Stations, at the fares shewn below, to
LLANYMYNECH
For LAKE VYRNWY, Etc.
AND
Criggion (for the Breidden Hills), Etc.
BEAUTIFUL SCENERY. CHARMING WALKS.
On Thursday, September 16th and three following Thursdays Sept. 23rd 30th and October 7th a MOTOR will run from LLANYMYNECH to LAKE VYRNWY after the arrival of the 9.45 a.m train from Shrewsbury, And return from the Lake to connect with the 5-10 p.m train from Llanymynech to Shrewsbury. Fare for the double journey, 6/6 each passenger. In addition to railway fare Shrewsbury to Llanymynech
Depart Shrewsbury for Llanymynech, 9-45 a.m. & 2 p.m.
Depart Shrewsbury for Criggion, 9-45 a.m.
Fare, Third Class: 3/1½
Available for return from Llanymynech 5-10 p.m. same day.
" " Criggion 4.40 p.m. "
Tickets issued to Criggion will be available for return from Llanymynech.
Teas and Refreshments can be obtained at the Lake Vyrnwy Hotel.
For Handbills and all further information, apply Mr. J. L. WHITE, Abbey Station; or
Received with thanks T. White & Co. 5.59
R. F. STEPHENS, Managing Director.

Shropshire & Montgomeryshire Railway.
GOLF AT LLANYMYNECH
RETURN THIRD CLASS TICKETS will be issued daily (Sundays excepted) commencing JULY 25th, 1921, and until further notice, by the Trains and Stations shewn below, on presentation of Golf Club Membership Tickets or Vouchers, obtainable from Golf Club.

	FARES.
SHREWSBURY	3/8
MEOLE BRACE	3/6
HOOKAGATE	3/3
EDGEBOLD	2/11
FORD and CROSSGATES	2/5

Available by 9-45 a.m. daily and 2 p.m. trains ex Shrewsbury (3 p.m. Wednesdays).

Available to return from Llanymynech by 5-25 p.m. train daily and Saturdays only 8-10 p.m.
ABBEY STATION, SHREWSBURY. April, 1921.
R. F. STEPHENS, Managing Director.
Rec'd 21/9/21. 5.59

was the carriage of minerals. Local coal supplies and oil to the Anglo-American Oil Depot at Abbey station, Shrewsbury, were completely overshadowed by the stone traffic emanating from the Breidden Hills quarries at the end of the Criggion branch, an extension to which had been constructed as early as 1867.

The distinctively coloured green Ceiriog stone, officially called metadolerite and worked from the middle of the nineteenth century to date, has been used for road surfacing, pre-cast and reinforced concrete and roofing granules. As already indicated, the peak year for stone traffic was 1931 but subsequent years, 1935 40,000 tons and 1939 15,000 tons, still represent considerable totals. Even during the wartime years and up to 1948 the annual totals did not vary very much, averaging between 20,000 and 24,000 tons, or ten loaded wagons per weekday from Monday to Friday.

ABOVE: War Dept Austerity 0-6-0ST 75187 (later WD 151, built R. Stephenson Hawthorn 7137 of 1944) pauses at Nesscliff with the daily S&M goods from Shrewsbury Abbey to Llanymynech during April 1947. Photo: Geoff Bannister

BELOW: Standard War Dept Austerity 0-6-0ST 71531 (Barclay 2185/1945) approaches Shrewsbury West station S&MR on 28th July 1948 with the 10.15 am Shrewsbury Abbey (S&M) to Llanymynech, the daily 'Civilian Goods Train'. Photo: Geoff Bannister

MILITARY CONTROL

Wartime Government control in 1941 reprieved the railway for another eighteen years, greatly reconstructed, modified, modernised and expanded to meet heavy wartime traffic demands. Over 25 square miles of land adjacent to the line was requisitioned for the construction of underground ammunition dumps, bunkers and storage depots connected by over one hundred miles of new sidings, loops and link lines serving Kinnerley and Nesscliff districts together with sub-depots at Argoed, Maesbrook, Pentre, Shrawardine and Ford. The War Department provided improved and more effective motive power in the form of GWR Dean Goods and later Austerity 0-6-0STs but the faithful ex-LSWR Ilfracombe Goods 0-6-0 3 *Hesperus* and the ex-LNWR 0-6-0 Coal Engines soldiered on into the initial period of army control although *Hesperus* was scrapped in November of 1941 and the Colliers were retired to store at Hookagate Yard in 1946. They languished there until 1950 before being dragged firstly to Stafford Road Factory dump, Wolverhampton, and later that year to Swindon for breaking up. The new Hookagate Yard had replaced the original S&M exchange sidings at Meole Brace Junction on the Shrewsbury & Welshpool Joint line at the War Department take over.

The locomotive of the S&M 'civilian' goods prepares to take on water at Llanymynech on an August day in 1949. War Department 0-6-0ST 75171 (Bagnall 2759 of 1944) came to Kinnerley in 1947 from the nearby Central Ordnance at Donnington. Photo: Geoff Bannister

TWO TRAINS FOR THE LINE

The S&M metamorphosis of 1941 did not alter one facet of railway operation. Remaining unchanged for nearly three decades was the provision of a weekday goods train from Shrewsbury Abbey station to Llanymynech on the Welsh border. After the regular passenger service ceased in 1933, traffic was generally curtailed to one goods train each way per day on which the occasional passenger could ride, the 8.10 am ex-Llanymynech and the 10.15 am ex-Abbey, the latter time give or take half and hour depending on the amount of station work required. More surprisingly, the train was even listed as a regular service in the 'yellow' section of the LMS Public Timetable for 1935. The accompanying nostalgic article which appeared in a Wolverhampton daily newspaper in 1934 admirably sums up the essence of this eccentric train journey and is quoted in full although the purist must be prepared to accept some journalistic licence in the account.

A YEAR TOO LATE FOR THE TRAIN
The Shropshire & Montgomeryshire Railway in 1934

Reproduced by kind permission of the Editor, 'Express & Star' Wolverhampton.

'The little station wore a deserted air, the railway lines were brown with undisturbed rust and the waiting room looked dismal and forlorn — even its clock had stopped. Up the platform I walked but there were no passengers so my suspicions were aroused.

I had been directed to the Shrewsbury station of the Shropshire & Montgomeryshire Railway by a group of local men who had discussed my problem of getting to Llanymynech and a timetable on the platform said that there was such a train at 10.15 am.

The clock on Shrewsbury Abbey Church across the opposite side of the road registered ten o'clock and it seemed I was in luck. I had been walking up and down the platform some minutes when a man came down the line. "All right for the 10.15 to Llanymynech?" I asked. He stared and then he laughed.

"If there is a 10.15" he said, "then it's a ghost train. This railway has been closed down for twelve months so far as passenger traffic is concerned." At first I suspected a joke but was soon to discover that the people of Shrewsbury were actually not aware that the railway had ceased to carry passengers.

The reason for this strange state of affairs is part of a sorrowful story illustrating how one generation may fight and slave for something only for a succeeding generation to cast it aside without a regret or a thought for the pains which had gone to bring it forth. It is the story of the building of a railway in the face of strenuous opposition — eleven Acts of Parliament had to be obtained by the promoters — and at a cost of nearly £2,000,000, for it to be so badly patronised by the travelling public after less than seventy years that there was no alternative but cease to run passenger trains.

But why was the public not aware of this? The reason is that the railway has gradually been neglected by travellers. Just before the service was closed there were only two regular passengers although goods was still carried. So few were affected by the closing that the event passed without notice. Yet in the lifetime of a man just over sixty years ago nearly 70,000 passengers a year were travelling on this railway.

There were two clerks on the station sitting in what had been the ticket office working at freight ledgers. They regarded the passenger who had arrived nearly twelve months too late for his train with unconcealed curiosity.

"It's very fine country along the line isn't it?" I asked.

"Yes," one of them admitted, "it is very fine. There are old inns and beauty spots with a great deal of folk lore attached to them."

I asked how one could get to the villages now that the trains had stopped running, adding that I wished to explore the countryside through which the 10.15 train might still be running. One of the officials said I could go in the guard's van of the only goods train that travels up the line each day. It was due to leave in an hour.

The offer was at once accepted and I climbed on board trying to recapture the sensations of the erstwhile passengers who once took the train regularly.

There was one other passenger, a girl who was the wife of one of the twenty-three men who are engaged with goods traffic on the railway. We sat on the only two available seats with a cheery warm stove between us. The van was loaded with boxes of grocery for the shops in the Shropshire villages along the line, barrels of beer and some bottles of spirit for the old Three Pigeons Inn at Nesscliff and the Royal Hill and Tontine Hotels at Melverley, cattle food for the farms and other sundry objects.

The van filled, the guard climbed aboard, put his head through the window and shouted. The goods train rumbled away on a journey that was painfully slow, being frequently interspersed by protracted shunting operations.

"This used to happen when people travelled on the train." Said the guard in answer to a question. "Sometimes it took about two hours to go twenty miles from Shrewsbury to Kinnerley. The passengers got impatient, most of them got their own cars, others went by the local bus." In addition to this there was the disadvantage of the hamlets and villages which the railway served being from half a mile to two miles away from the station.

Looking through the window I saw few cottages. The country was beautiful, the leaves of the trees in bordering woods were like burnished gold. Brooks in spate as a result of recent rain rippled through quiet meadows haunted by Kerry sheep and by cows. Now and then old farms could be seen in the distance and tumbril-like carts full of beet rumbled along nearby lanes. Thousands must have been delighted by the views through the window of the trains which used to run along this line, thousands may be similarly charmed if the line

opened again for passenger traffic.

As I left the train I saw on the station a notice. This said as though satirically, SUPPORT THE LOCAL LINE.'

By kind permission of Major C. H. Calder MBE, RE then Operating Officer of the S&M Light Railway Detachment RE, I was privileged to experience a similar journey during 1949 in the brakevan of what had become the daily 'Civilian Goods', still 10.15 am ex-Abbey station Shrewsbury to Llanymynech hauled by War Dept Austerity 0-6-0ST 75171. It soon became obvious that even eight years of upheaval on the line had not completely eliminated the ambience so delightfully typical of the days of Colonel Stephens and his successor W. H. Austen in the 1930s. This particularly applied west of Kinnerley and on the branch to Criggion. The latter remained under S&M control and later BR Western Region to the end.

I had been ordered to report to Abbey station at 10.00 am; actually the letter said 1000 hours. Having watched 75171 make a somewhat leisurely shunt and take water on board I helped the guard to load cartons of groceries and cigarettes into the brake for delivery to Nesscliff and Kinnerley. My diary records that we eventually set off for Llanymynech at 11.25 am with considerable pauses at Hookagate, Ford, Nesscliff and Shrawardine for 'station work'. Having taken water at Shoot Hill it was time for another drink at Kinnerley where the locomotive was detached and run down to the shed alongside the Criggion branch. Retiring to the local hostelry for my own lunch time liquid sustenance, the remainder of the journey remains but a hazy recollection. I distinctly remember travelling on the footplate from Kinnerley to Llanymynech with ritual stops at Wern Las and Maesbrook Crossings. The driver also made an emergency brake application between the latter stations in order to retrieve a sweet briar cut earlier in the day from the luxuriant hedgerows and the fireman duly hoisted it on to the bunker for safety. I had read stories about stops for rabbits, pheasants and mushrooms on other rural branch lines but this was definitely my first and last sweet briar encounter. □

RAILWAY RETURNS of the Board of Trade and the Ministry of Transport HMSO

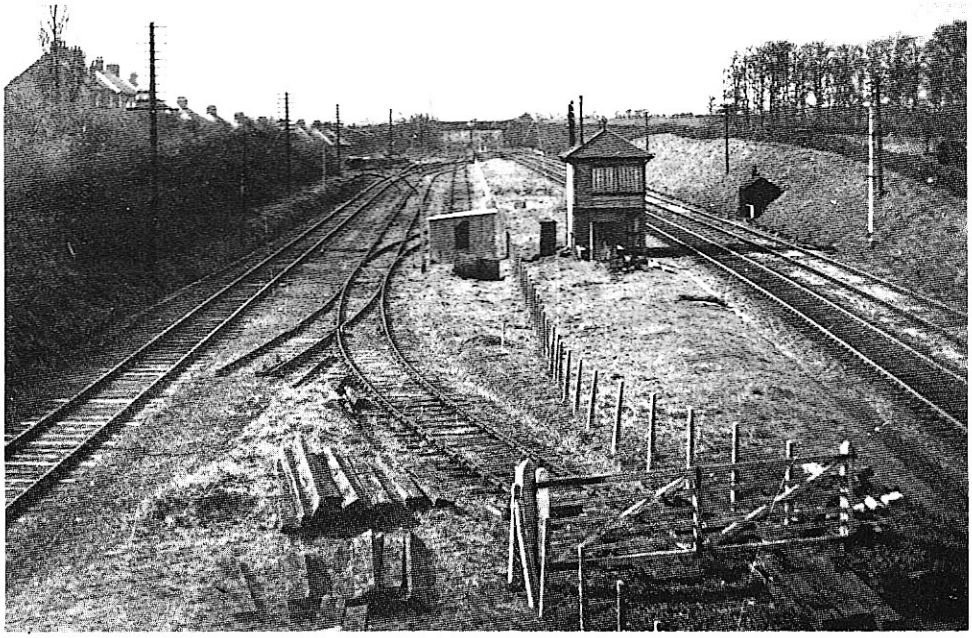
THE GEOGRAPHICAL BACKGROUND TO THE SHROPSHIRE & MONTGOMERYSHIRE RAILWAY: Geoffrey F. Bannister: Unpublished thesis: University of Birmingham 1950

Various TRAFFIC LEDGERS and GOODS ABSTRACTS: S&MR Stations 1915-1949

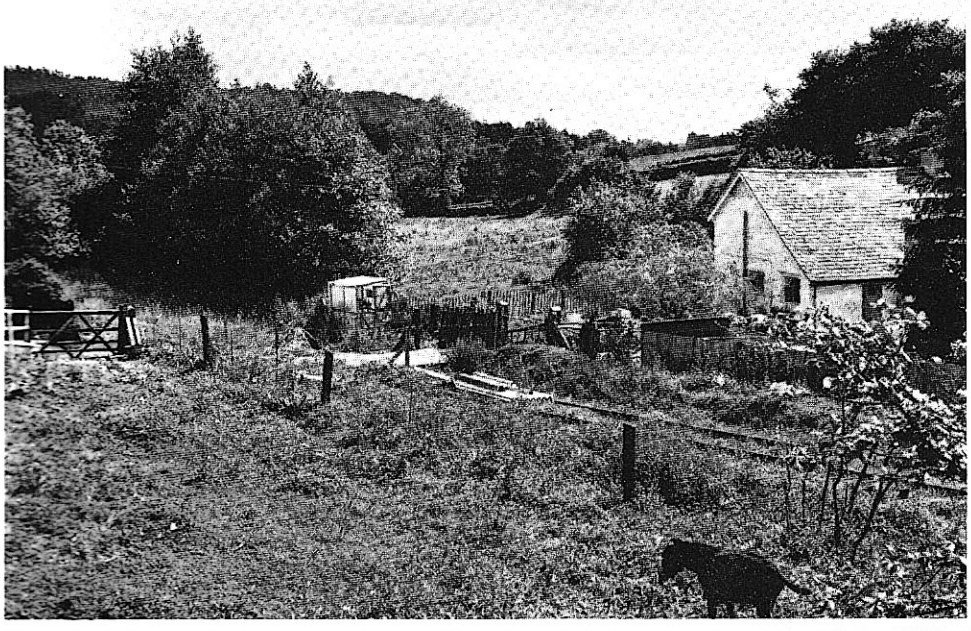
SHROPSHIRE & MONTGOMERYSHIRE RAILWAY: Eric S. Tonks 1947 (revised 1972 Ind R Soc.)

SHROPSHIRE & MONTGOMERYSHIRE RAILWAY: K. and S. Turner 1982 David & Charles

Interviews with N. K. Stuart, Assistant Manager British Quarrying Co. Criggion, Oliver Veltom, British Railway Western Region, Shrewsbury. Employees of the S&MR, especially Messrs Fardoe and Funnel



The derelict remains of Meole Brace Junction Exchange Sidings in January 1949 viewed north westwards towards Kinnerley. The S&M main line from Shrewsbury on the left runs parallel to the LNW/GW Joint line tracks running to Buttington Junction near Welshpool. Meole Brace Junction fell into disuse when the War Dept constructed a new marshalling yard and exchange sidings at Hookagate. Photo: Geoff Bannister



Closed for nearly 20 years but still unlifted. This photograph taken in the summer of 1986 shows a derelict portion of the original Potteries, Shrewsbury and North Wales Railway between White Gates Crossing and the remains of the quarry on the Nantmawr branch. Sizable trees grow through the sleepers over much of the remaining route making walking impossible. Photo: Andrew Bannister

SLIP COACHES

AND SIMILAR WORKINGS

D. L. FRANKS *and* **B. WHITE** *survey a practice which overcame intrinsic hazards to provide safe and convenient service to scores of stations*

To understand fully the practice and purpose of detaching a passenger carrying vehicle from a moving train it is necessary to condition the mind to a very different set of circumstances to those which prevail on the railways of today. In the late 1850s, railway management was faced with the problem of improving the overall timing of important expresses while maintaining an efficient service for passengers detraining at intermediate stations.

This problem affected the London, Brighton & South Coast Railway perhaps most of all. Its traffic between London and Brighton, involving long distance commuting of an intensity not then found on any other line, was of great importance, but the company's locomotives, comparatively low-powered, could not easily combine a stopping service with tight timings. A fast train, in those days before the continuous brake, could easily lose ten minutes of overall time in stopping and regaining speed.

After preliminary experiments, therefore, the LB&SC initiated the very first main-line slip in February 1858, when a Hastings portion was slipped from a Brighton express at the up and coming town, and railway junction, of Haywards Heath. This was shortly followed by an express slipping a portion at Preston Park, where it was attached to a train for Littlehampton, thus giving a service to Hove and Worthing.

The South Western was second in the field with a slip at Canterbury in May 1858, followed by the Great Western operating a dual slip from one train — first at Slough and then Banbury, from a Wolverhampton express.

Early practices

However, the practice of detaching a passenger carrying vehicle from a moving train had been in use elsewhere for several years, although in a manner rather different to that generally understood as 'slipping'. The pioneer was the little Hayle Railway in Cornwall, which connected that town to Redruth in 1834. Twelve miles long and single track, the railway operated trains which were mixed — engine, goods wagons and passenger carriages, in that order. As a train approached Hayle, the train was divided, the guard uncoupling the carriages, which were diverted into a short spur leading to the passenger station, the wagons continuing behind the engine to the docks.

The same method of working was also used by the LSWR at old Waterloo station, this time to release easily an engine which had brought a train into the terminus. The engine was run into a facing siding while the entire train of coaches was uncoupled and diverted into the platform under its own impetus and controlled by the guard in charge of the brake. This practice ceased when Waterloo was rebuilt; the co-authors know of only one other example of it — on the Great Northern at Stamford East (as it was known later) where the carriages were 'lowered' into the platform after the engine had been detached (a slight gradient prevailing). The arrangement ceased at Stamford, and elsewhere, after a guard lost control of his train and it crashed through the buffers, mounted the platform and demolished part of Stamford station building.

The Edwardian passenger holds his hat against the slipstream as the slip coach off the 3.15 express from Marylebone arrives at Leicester in 1904. It continued through to Nottingham and Lincoln (Cleethorpes in earlier years). Photo: W. Bradshaw, V. R. Webster collection

Types of slip

Slipping reached its peak in the first decade of the present century, when one hundred and fourteen slips were practiced daily. They varied in size and purpose and may be summarised as follows:

1. THE TOWN SLIP. This was a service to a particular town which would otherwise not have an express service. It was, of course, one way only.
2. THE RESIDENTIAL SLIP. Primarily intended for businessmen returning home from work. The best example was on the Lancashire & Yorkshire Railway, which provided a 'club' carriage, as well as an ordinary vehicle, making it a two carriage slip.
3. THE CONNECTING SLIP. To make a connection with other services, as at Westbury for Weymouth, or Taunton for Minehead.

4. THE MARKET DAY SLIP. An excellent example of this type was the Manchester-St Pancras express slipping at Loughborough (then an agricultural centre) to allow merchants to attend the Corn Market.
5. THE V.I.P. SLIP. This was provided by certain companies for particularly important people and under exceptional circumstances.

The V.I.P. slip is most interesting and gives a good insight into the way the privileged few were accommodated by the early railway companies. The outstanding instance took place at Finmere on the Great Central. The station was sited at least a mile from the village and slip coach services were provided for local dignitaries Colonel Trotter (later Lord Fortescue), who had railway interests, and A. E. Prosser who, during the First World War, was a member of the Railway Executive.

Mention must also be made of the Paget family of Sutton Bonnington, two members of which held prominent positions with the Midland Railway. The elder Paget was chairman and his son, operating superintendent, and they enjoyed their own station — Kegworth — 'at the bottom of the garden' on the Midland main line where an early evening slip was made 'when required'.

Large quantities of luggage were also accommodated on V.I.P. slips. One Scottish landowning family took lengthy holidays on their estate in Lincolnshire, travelling by the 10.00 am ex Edinburgh to Grantham where they detrained complete with a ton or more of effects. They then boarded a slip coach on the following express and were duly slipped at their local station of Corby.

Method of operation

The prime feature of slip coach working was that it was a 'one way' method. Most companies operated a slip portion of not more than four vehicles, two being the most common number, depending on demand. There was no reason why a normal carriage of the period could not be used, providing it was fitted with the slip gear, described later. Early slip coaches were the primitive four-wheelers of the day, progressing to six-wheelers and to bogies. There was no difficulty with carriage lighting as vehicles were individually lit — early lamps were paraffin, lit in the station lamp room and fitted by the lamp man climbing onto the carriage roof. The introduction of gas found a similar situation, the lamp man walking along the roofs of the train, igniting the lamps with a naked torch.

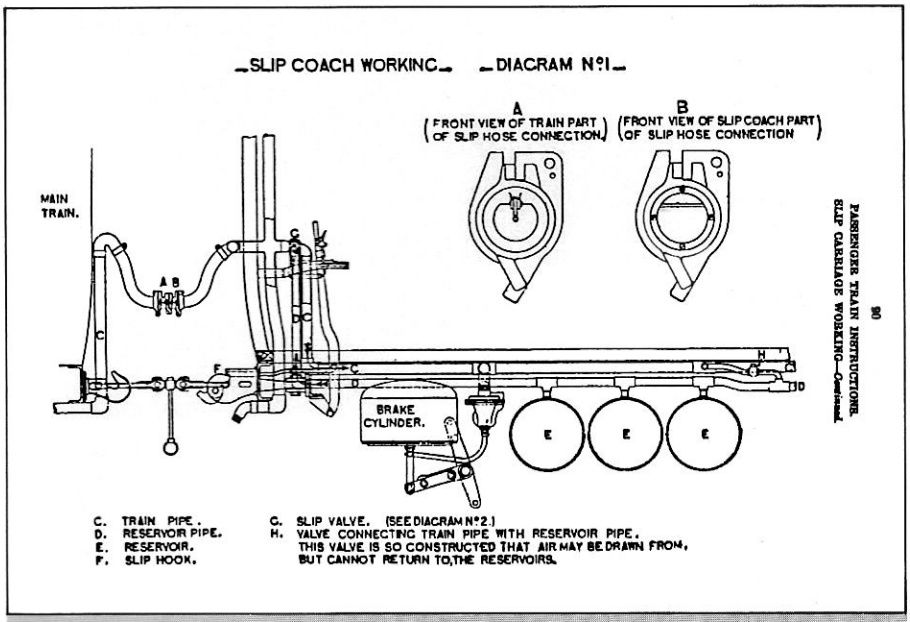
One complication in early days was caused by the forerunner of the communication cord. The first method used was a cord which ran along the eaves of the carriage roofs; when a passenger leaned out of a window and pulled it, it rang a large gong on the side of the engine's tender. Early instructions for the operation of slipped vehicles stressed the need to disconnect the cord at the point of division and attach it to specially provided fasteners on the last train coach and at the forward end of the slip portion.

In the early years of slipping, the actual operation was comparatively simple, since passenger trains did not have a continuous brake; with its introduction, new systems needed to be developed. Both the vacuum and the Westinghouse brakes rely on the admission of external air pressure to provide the automatic brake application to the whole train. The problem was to preserve brake power on both train and slipped portion. At first, this was solved by the slip coach guard leaning out of an opening window and turning a tap on the train side of the hose coupling, a similar tap being provided within his own vehicle.

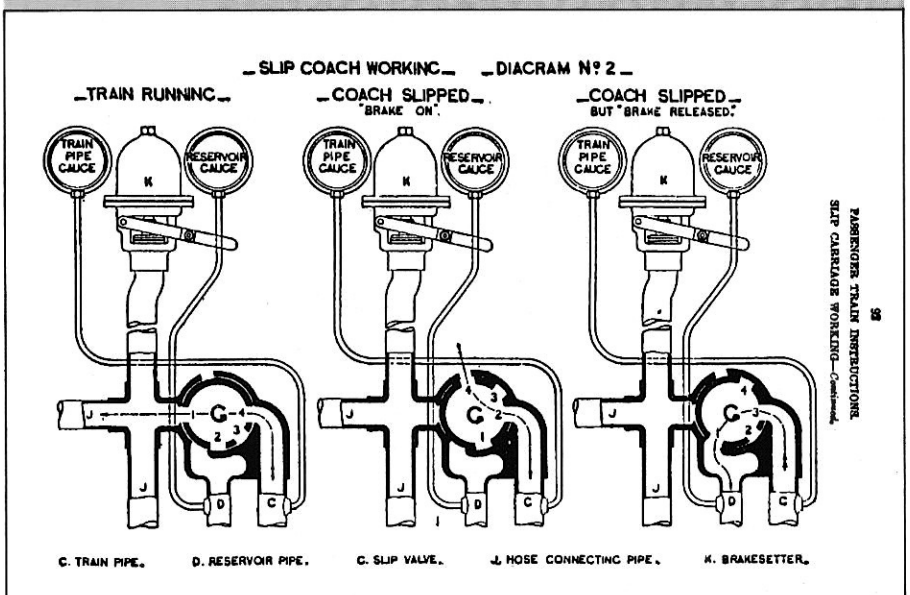
This system was developed into two different automatic slipping systems:

1. The pipe was sealed by a clamp hinged to shut at the first inrush of air, and
2. a ball and socket valve, designed to act in the same manner.

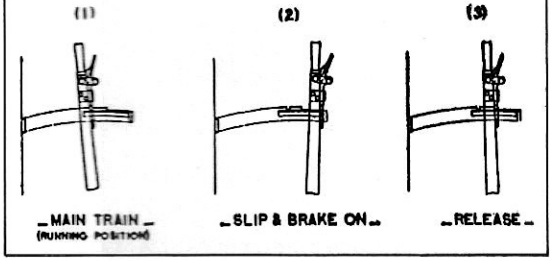
The guard was required to understand fully the working of the braking systems under his control. He had to be satisfied, before departure, that the regulation vacuum had been created, or air pressure attained, this being registered on a gauge in his compartment. He was also required to check that all slipping apparatus was in proper order and that the 'side chains' were not coupled. (Early passenger carrying vehicles had chains at the sides, as well as central coupling, a practice which lingered on into the twentieth century on some goods and mineral wagons.) The coupling release cord, coupling hook lever and alarm cord disconnection were all also the guard's


SLIP COACH WORKING. DIAGRAM N°1.
A (FRONT VIEW OF TRAIN PART OF SLIP HOSE CONNECTION)
B (FRONT VIEW OF SLIP COACH PART OF SLIP HOSE CONNECTION)
MAIN TRAIN.
BRAKE CYLINDER.
C. TRAIN PIPE.
D. RESERVOIR PIPE.
E. RESERVOIR.
F. SLIP HOOK.
G. SLIP VALVE. (SEE DIAGRAM N°2.)
H. VALVE CONNECTING TRAIN PIPE WITH RESERVOIR PIPE. THIS VALVE IS SO CONSTRUCTED THAT AIR MAY BE DRAWN FROM, BUT CANNOT RETURN TO, THE RESERVOIRS.
PASSENGER TRAIN INSTRUCTIONS. SLIP CARRIAGE WORKING—Continued.
90

Facsimiles from the Great Western Railway General Appendix to the Rule Book, published 1936, illustrating slip coach operation. Courtesy BRB


SLIP COACH WORKING. DIAGRAM N° 2.
TRAIN RUNNING.
COACH SLIPPED. "BRAKE ON".
COACH SLIPPED. BUT "BRAKE RELEASED."
TRAIN PIPE GAUGE
RESERVOIR GAUGE
K
C. TRAIN PIPE. D. RESERVOIR PIPE. G. SLIP VALVE. J. HOSE CONNECTING PIPE. K. BRAKESETTER.
PASSENGER TRAIN INSTRUCTIONS. SLIP CARRIAGE WORKING—Continued.
95

The guard performed the operation of slipping by the use of one lever (with three positions)



responsibility and were carefully checked, after which he conferred with the train guard to arrange for his 'look out' at the point of release. Finally, he made sure he had his signal flags to indicate to the driver whether the slip had been carried out safely or otherwise.

The specially equipped slip coach was fitted with coupling hooks that were hinged, or had an opening link, at the bottom of the jaw, while the upper part of the hook was held in position by a horizontal steel bar. This bar was connected to a lever in the guard's compartment in the slip coach which when pulled, allowed the hinged bottom of the hook to drop clear and the coupling to part. As the gap between the train and the slip coach widened, the vacuum and steam connecting hoses were pulled apart and non-return valves sealed their ends. The slip coach guard was then in control of the brake on his vehicle(s).

Some examples

Companies practising slip workings had different ways of regulating the point at which each slip took place. Local circumstances dictated its precise location. In some cases, a lineside structure was used as a marker for slipping as well as for its primary function; such as at Faversham, SECR, where a footbridge was used.

On a rising gradient, the point of slip had, of course, to be nearer the station than on a falling gradient. In some places, over-line bridges in combination with other factors, such as bends in the track, restricted visibility and led to the transfer of slipping locations. A slip at Shipley on the MR was transferred to Saltaire for just this reason. At Accrington on the L&Y a combination of sharp curves and a high retaining wall restricted the guard's ability to signal his driver and gave rise to the provision of two flagmen on the platform, one on the leading end, the other on the trailing end. Upon the arrival of the train, flagman no.1 indicated the state of the slip to flagman no.2 who in turn transmitted its success or failure to the driver.

At Nottingham Victoria the station was approached via Sherwood Rise Tunnel, an open cutting through Carrington station and Mansfield Road Tunnel, all with a 16 mph speed restriction. To warn drivers of the proximity of their slip point, audible warning was provided in the tunnel; a gong activated by a treadle bar depressed by a wheel flange.

Clear visual contact between guard and driver was essential and if it was compromised by fog, snow or other hazard, a telegram or warning was sent by the receiving station to that sending the slip. A special stop would then be ordered, this being the responsibility of the driver who indicated his intention by sounding his whistle; the guard, having noted the conditions, would be anticipating it.

In some cases, the slipping of coaches actually *eased* the task of the operating staff. In the case of the Cornish Riviera Express, status train of the Great Western which for a short time ran non-stop Paddington to Plymouth (later Paddington-Exeter), slips were made at Westbury (for Weymouth), Taunton (for Minehead) and Exeter (the Torbay towns) — thus effectively reducing a heavy load before the difficult Devon banks were reached.

It is well worth recording that no passenger deaths as a direct result of slip coach working have ever occurred on a British railway. Mishaps *did* take place, but were of a minor nature. However, it was the worst ever slip coach accident which prompted the Great Central to abandon the practice. In 1937 the 6.20 am Marylebone-Bradford slipped its usual coach at Woodford & Hinton (later Woodford Halse), destined for Stratford-on-Avon. The vacuum on the train was destroyed by a faulty automatic valve failing to work, thus stopping the train, and the slip coach ran into it at rear. No serious injury resulted, but passengers were badly shaken.

As ever, it was the safety-conscious Great Western which went to greatest lengths to instil safety into its employees. It issued copious regulations covering slip coach operation, and published them as an appendix to the company rule book, other companies issuing such orders as appendices to the working timetable.

In 1958, British Railways announced that more capable engines were now available and that 'one way' slip services would be eliminated. All important slipping places would henceforth be served by stops. The wheel had turned full circle and a largely 'make-shift' practice initiated a century before was deemed redundant. The last slip coach on a British railway arrived at Bicester on a Wolverhampton train on Friday 9th September 1960, carrying passengers for Bicester itself and for connection to Banbury. One disgruntled passenger complained about the need to change — no longer could he relax in uninterrupted comfort in the slip coach. □

LEFT, TOP: A single coach being slipped at Loughborough on 26th July 1911, possibly for the Corn Market mentioned in the text. Photo: Derby Collection, National Railway Museum

LEFT, BOTTOM: An up Lancashire & Yorkshire main line train slips a pair of coaches at Rochdale on 9th October 1913. Photo: Horwich Collection, National Railway Museum

THIS PAGE: 16th April 1953 at Reading: a pair of coaches is slipped from the 8.00 am Plymouth-Paddington, hauled by 6009 *King Charles II.* Photo: V. R. Webster collection

PROFESSOR JACK SIMMONS *looks back to the dawn of railways and finds human interest*

AN ENGINEMAN'S DIARY 1855-62

We seldom learn anything directly from those who managed or worked the Victorian railways. A few of the men at or near the top kept diaries, wrote letters that have survived, or produced memoirs: Daniel and T. L. Gooch for instance, Bidder and Vignoles, R. B. Dockray and Joseph Mitchell. But they are a few only, and their main attention is given, very properly, to their own tasks, to planning and direction. Their writings seldom have much to show us of the lives of men who worked under them. A retired locomotive inspector of the London Brighton & South Coast Railway, Michael Reynolds, published a popular book, *Engine-Driving Life,* in 1881, but it has not much to tell us that is useful. It is sentimental and rather slipshod, in marked contrast to his admirably lucid manual *Locomotive-Engine Driving* of 1877. Though there has been some investigation by modern writers into the work of railwaymen in the twentieth century, very little has yet been written about those of the nineteenth, with the exception of one valuable study, P. L. Kingsford's *Victorian Railwaymen.*

Where then are the voices from the ranks to be heard? To some extent in the early trade union journals, though there they are usually, as one would expect, voices of complaint. They sound out from time to time in the reports on accidents investigated by the inspecting officers of the Board of Trade. Under their patient probing a good deal emerges about the conditions of railway service, particularly about the hours the men worked. But since these were inquiries into irregularity, when something had gone wrong, they do not often help us to understand the normal routine of the men's employment. Unfortunately, among all the main categories of records surviving from the old British railway companies, those concerned with their staff are the most defective.

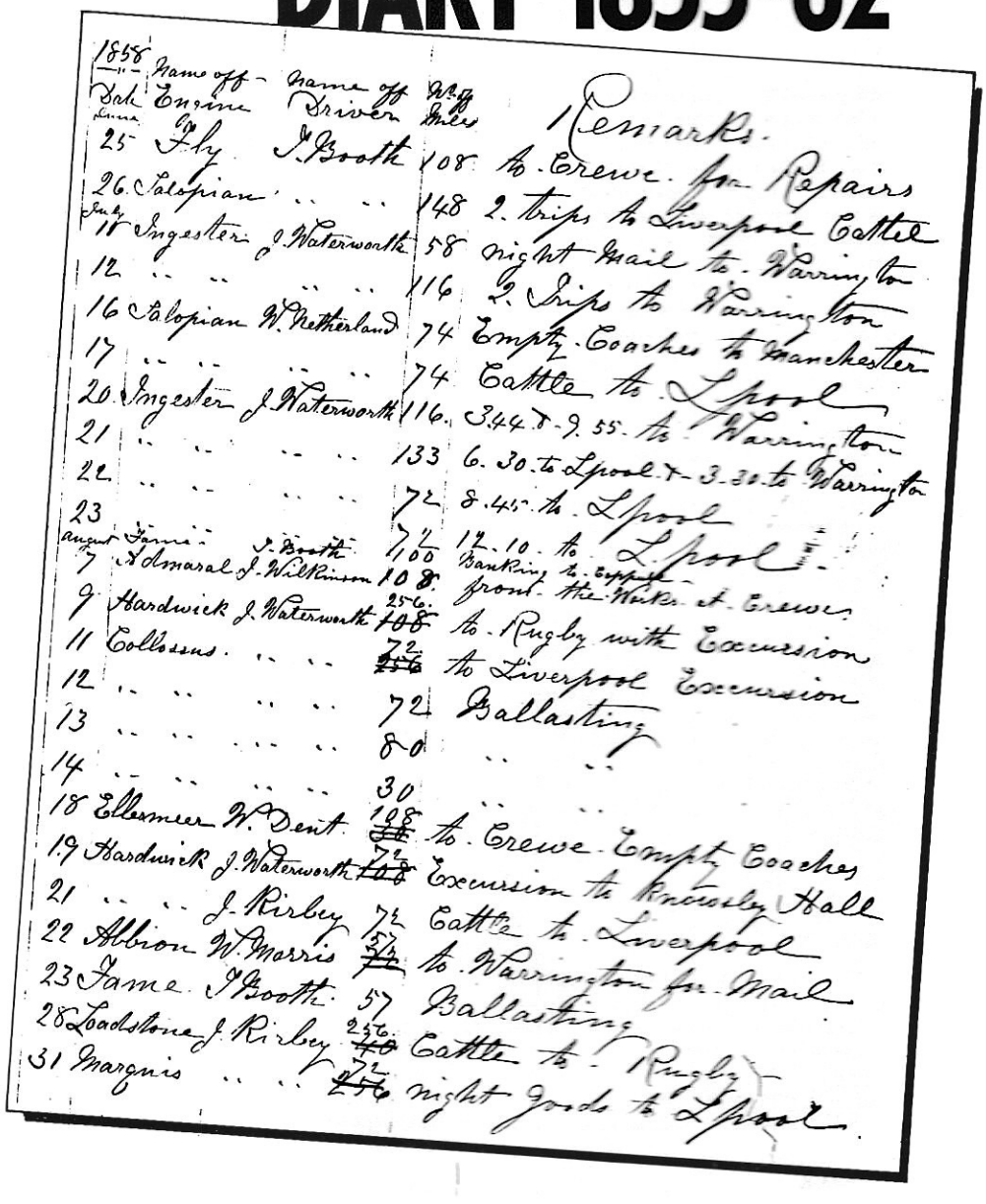
Here and there some alert journalist troubled himself to set down the recollections of an ancient railwayman: but then it was usually because he *was* ancient, not because he had anything very remarkable to say.[1] And being recollections they were subject to inaccuracy, to all the colourings that arise from memory.

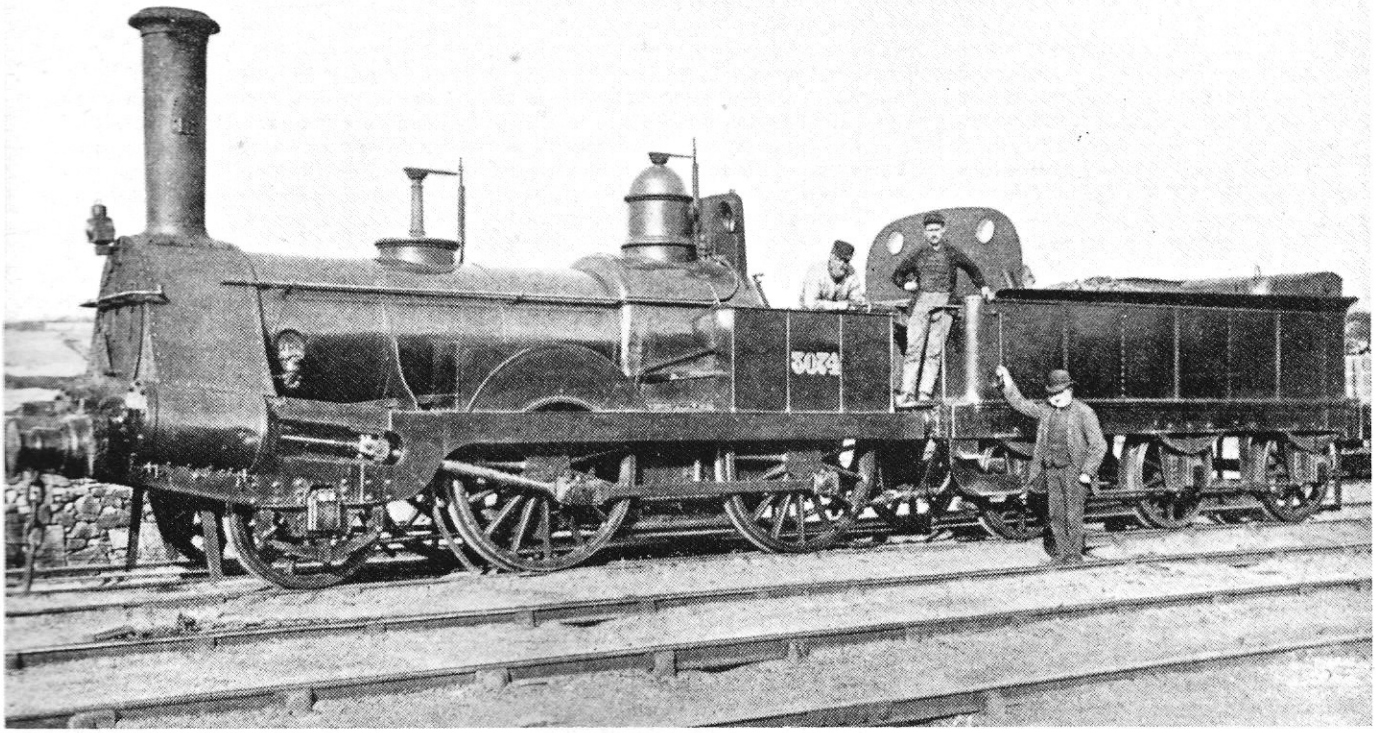
So even a small and simple detailed record of a railwayman's work, made at the time, may be of considerable value when it ever turns up. The diary kept by Thomas Baron as a fireman and engine-driver in the service of the London & North Western Railway is for the most part a bare catalogue of daily work done, with very little comment. But it is worth attention, as a clear and truthful account of a routine. It is contained in a bound notebook, and though many of the later pages have been removed the diary itself is complete, running from 5th December 1855 to 30th November 1862, when Baron apparently decided to bring it to an end. The history of the document seems to be unknown. It went with the British Transport Historical Records to the Public Record Office at Kew, where it is now: RAIL 1015/4.

Though there are large gaps in the diary at the beginning, from 12th January 1857 onwards it is the record of the work of almost every day when the writer was employed. The entries usually comprise no more than the date, the name or number of the engine, the name of the driver that Baron worked with until he became one himself on 28th April 1862 (at the age of twenty-seven),[2] and the work done: that is, the trip — the time of the train's departure, to a named place — and its length in miles. As a fireman, Baron seems to have had one day off in the week.

When he became a driver he worked all seven days, with Sunday usually spent on shed, looking after his engine. His absences from work were infrequent, and they were from causes he sometimes notes, rarely extending to more than a single day at a time. Other information is given here very seldom. He notes down nothing, for example, about his pay, whether for his normal work or (if he got any) for overtime. He glances aside from the footplate only when something happened that struck him as worth special record.

The regularity of the entries is remarkable. The diary has, at first sight, the appearance of a fair copy made from rough notes — possibly the diarist's pay sheets.[3] The handwriting is even and consistent throughout, and I believe it to be Baron's own, not a copyist's. The inscription on the inside of the front cover (it will be quoted here later) is plainly the writer's own statement, and the hand in which it is written is the same as that in the rest of the book. This argues that the whole record as it stands was written up, if not daily at least at frequent intervals, by Baron himself, not by any one else on his behalf, using his notes. The argument is fortified by one change in spelling. Down to 15th October 1860 the diary


1858
Name of Engine
Name of Driver
Miles
Remarks.
25 Fly J. Booth 108 to Crewe for Repairs
26 Talopian .. .. 148 2. trips to Liverpool Cattle
Jan 1 Ingester J. Waterworth 58 night Mail to Warrington
12 .. .. 116 2. Trips to Warrington
16 Talopian W. Netherland 74 Empty Coaches to Manchester
17 .. .. 74 Cattle to Lpool
20 Ingester J. Waterworth 116 3.44 & 9.55 to Warrington
21 .. .. 133 6.30 to Lpool & 3.30 to Warrington
22 .. .. 72 8.45 to Lpool
23 .. .. 74 12.10 to Lpool
August 7 Admaral J. Williamson 108 Banking 2 coppers from the Water St Crewe
9 Hardwick J. Waterworth 108 to Rugby with Excursion
11 Colossus .. .. 72 to Liverpool Excursion
12 .. .. 72 Ballasting
13 .. .. 80 .. ..
14 .. .. 30 .. ..
18 Ellesmere W. Dent 108 to Crewe Empt Coaches
19 Hardwick J. Waterworth 72 Excursion to Knowsley Hall
21 .. .. J. Kirby 72 Cattle to Liverpool
22 Albion W. Morris 72 to Warrington for Mail
23 Jane J. Booth 57 Ballasting
28 Loadstone J. Kirby 256 Cattle to Rugby
31 Marquis .. .. 72 night Goods to Lpool



LEFT: A page from the diary, kept while Baron was a fireman, extending from 25th June to 31st August 1858. This gives a fair sample of the quality and character of his record. Some minor mis-spellings occur in the names of the engines, and "cattle" appears in two forms; but there are no others. Photo: Public Record Office, Crown Copyright

ABOVE: 'Crewe Goods' locomotive. Baron fired on *Commodore* and *Loadstone,* of this type, for about six months, with only one intermission, in 1860. The machine shown here was originally 310 *Cerberus,* renumbered 3074 in 1887. The photograph was taken at Buxton in the 1890s, the engine then being fitted with weatherboards for working on the Cromford & High Peak line. It was scrapped in 1897. Photo: National Railway Museum

frequently refers to "Cendal" when it records a journey to or from that Westmorland town. Then the writer seems to have discovered that the accepted spelling was "Kendal", for the name appears in that form thereafter. If the present book is a fair copy, why should the original wrong spelling have been preserved and then changed? Surely the writer would have made it "Kendal" throughout?

We know very little of Baron's life. From notes appended to the diary we learn that he was born at Adlington, Lancashire, on 5th April 1835, the eldest son of Robert Baron and his wife Betty (Markinson), that he became a cleaner with the London & North Western Railway in its engine sheds at Preston in June 1855, and then quickly a fireman. He was moved to Crewe in October 1861, and in September 1862 to Abergavenny. He continued to drive there for fifteen years until, at forty, he was promoted to become night foreman at Abergavenny shed. The surviving staff records of the company do not seem to allow us to follow his career any further.

Now and then he would take a day's holiday, which probably meant loss of pay. "At Morcame & Lancaster Pleasur", he records on 26th September 1860; "to Crumblen Vieadock (Crumlin Viaduct), off Work", on 21st July 1862.[4] On 4th March 1859 he notes: "My Mate Killed at Stafford. I worked the train Back"; five days later he went to the funeral at Bolton.[5] The entry for 12th December 1860 — it was a Wednesday — reads: "Shead (i.e. on shed) and Buring (burying) Child". On 4th January 1862 he "saw Madox hung at Stafford".[6]

The few pages that have been preserved after the conclusion of the diary have nothing to do with railways at all. They include some addresses, among them those of a decorator and two house agents at Wigan — did Baron come to own his house, or perhaps more than one? Some fragments of family history are set down here, concerning his parents and the births of himself, his brothers and sisters; a number of the christenings and burials had taken place at the parish church of Standish, north of Wigan. Baron also preserves a few simple prescriptions in case of illness. The first is perhaps too laconic to be useful: "Receit for Stomak and Hepatite 5 New Egs". But the last is more specific: "A Reciet for the yellows (i.e. jaundice). Boiled Ormric[7] and Goos Greace. Aply it on a plaster on the Crown of the Head".

In general the account is of work done to a very steady routine, seldom varied. When the line from Abergavenny to Brynmawr was completed he was detailed to drive the government inspector over it on 19th September 1862. With its opening on 1st October he was set to work conveying passengers three times daily up and down the line, which was 9½ miles long. His record shows that during the seven months April-November 1862 he drove a little over 12,000 miles, an average of seventy-eight for each of the days on which he worked.

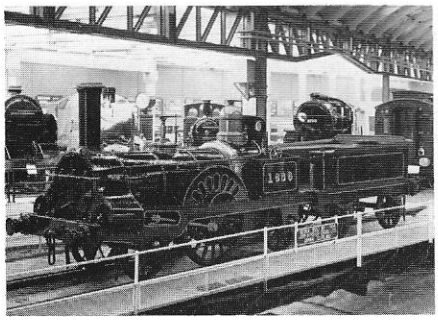
The tasks he had to perform were varied. When he was a fireman he had several spells of "coaling"; I suppose that means taking coal trains (perhaps from the collieries themselves?) along the main line. Sometimes he and his engine were set to bank trains up the steep incline northwards from Wigan. Occasionally he went with excursions, from Preston or Crewe to Rugby, to Liverpool and Manchester and Chester, and to Knowsley Hall. His engine might be one of a pair used on express trains, quite often the Irish Mail to and from Holyhead. From Preston and Crewe he worked almost entirely within the Northern Division of the railway, crossing its frontiers now and then to run as far as Rugby, but never going any nearer to London.

He fired for long periods with the same driver. The London & North Western Railway followed the practice of allocating an engine to a single driver for a substantial time, though not for years on end, as the Midland and Brighton companies came to do later. From 1st to 22nd September 1862, working between Hereford and Newport, his engine happened to be *Columbine,* and that may perhaps bring Baron closer to us, for *Columbine* is still to be seen today, only a little altered, in the National Railway Museum at York.[8] A student of the working of the London & North Western Railway at this time, or of the service of its individual locomotives (Baron worked on a hundred of them, each specified by name or number), will find it worth while to look at the record set down in this book.

But the diary is not interesting solely as an account of this man's work. It throws a little light on a general question, which has not been much discussed: how far were railwaymen, and engine-drivers in particular, literate in the Victorian age?[9] That trains might still be driven at this time by men who were totally illiterate appears from a report on an accident that occurred at Nantyderry on the Newport Abergavenny & Hereford Railway on 12th November 1856. The occasional driver employed on the express train

derailed there said he could not read or write, and as the official commentator pointed out he "could not therefore make himself acquainted with the book of regulations, with a copy of which he was supplied".[10]

Baron's first words, appearing inside the front cover of his book, are these: "Dairey from the year 1855. Acount of Work don. name of Engine I whent with and the Drivers I Fired for. and places runt to from Preston. Comenced Cleaning at Preston June 1855". The spelling is phonetic, and curious here and there: "whent" appears several times, "of" and "off" are used interchangeably. When he moves house to Abergavenny he takes his "Wife & Furnuter". Naturally, a number of the names of his engines are mis-spelt:



ABOVE: *Columbine* in preserved condition at the National Railway Museum, York. Photo: NRM

BELOW: The Crumlin Viaduct (west of Pontypool), much as Baron would have seen it when he went there. Built in 1853-7 to the designs of Charles Liddell and T. W. Kennard, it was one of the pioneers of prefabricated metal bridge construction on a large scale. It was demolished in 1965. From a sketch by H. J. Cooke in H. N. Maynard's *Handbook to the Crumlin Viaduct* (1862).

"Sirius" becomes "Serrious", "Fury" is rendered "Fewrry".

But these are trivial mistakes. The real surprise Baron offers us springs not from them but from the solid achievement that his diary represents.

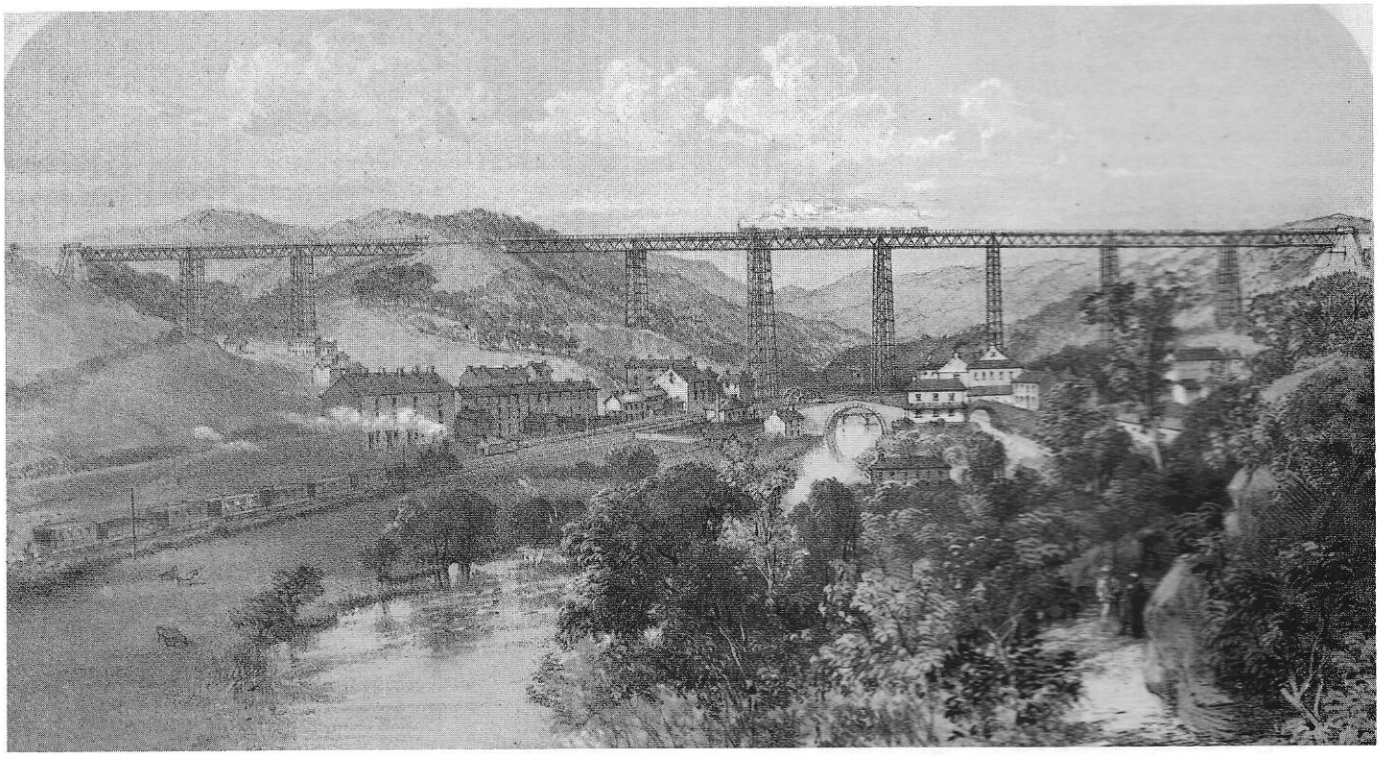
The penmanship (if it is, as I think, his own) is admirable — extremely clear, quite as good as that of many men of some education; and surely it was not much easier to learn to write than to spell. Baron may have had no formal education at all. But he had certainly picked up a good deal before he became a railwayman at the age of twenty, and as the small matter of "Cendal" demonstrates, he continued to be capable of learning.

He was evidently a man of good natural intelligence. His rise in the railway company's service — steady, if slow — is confirmation of that. The diary proves that his intelligence was indeed rather exceptional. How many of us now would manage to keep a careful record like this, when working long hours for six or seven days in the week? Baron gives no indication why he undertook this labour; nor why, having kept it up so long, he abandoned it. Perhaps we may guess that his additional work and responsibilities as a driver left him too tired to manage the careful recording, day by day, at the end of his task.[11]

The value of what he has to tell us is greater than he himself could ever have imagined it would be. The official records that were once maintained — of rosters of work and of allocations of staff to sheds, for instance — have now almost all disappeared. There can never have been many enginemen in the early Victorian age who kept records of their own like this one. A few other diaries of this kind may still await discovery. If they are found, they will be very welcome.[12] Meanwhile, we should be grateful to Baron for showing us a routine of employment that is hard to find set out so clearly and regularly anywhere else, except by chance now and then in some accident report, and for doing it with the occasional asides he affords us, in a way that makes his simple account worth examination still.

Footnotes

1. Among the more useful recordings of this kind may be noted the recollections of the engine-driver Joshua Slowen, extending from 1838 to 1903, published in the *Sheffield Independent*, 9th October 1903; see D. L. Franks in the *Railway World*, xliv (1983), 350-1.
2. He had previously driven a shunting engine sometimes within the yards at Crewe.
3. I owe this suggestion to Mr P. D. J. Roos, who kindly discussed the diary with me at Kew.
4. This great iron bridge had been completed in 1857 and at once became a justly famous sight.
5. This accident was not reported on by the Board of Trade.
6. Maddocks (that is the more probable spelling of his name) was one of three young men convicted of the murder of John Baggott of Bilston. Only one of them (David Brandrick) was hanged; the other two were reprieved. So it must have been Brandrick's death that Baron witnessed at Stafford. I am grateful to Dr John Bourne and Mr Tony Hutchinson for disentangling this story.
7. The most probable identification of this plant (spelt here phonetically) is with armoracia, or horseradish. I owe this suggestion to a pharmacist, Mr John Hind.
8. It used to be supposed that *Columbine* was the first locomotive built at Crewe, but that is a mistake. The first was No.32, *Tamerlane*, completed on 20th October 1843. *Columbine* was the twentieth Crewe engine, taken into stock about 1st July 1845: D. H. Stuart and B. Reed, "The Crewe Type", in *Locomotives in Profile*, ed. B. Reed (1971-4), ii. 54-6. The engine, as exhibited at York, has lost its name, which was transferred to a Large Bloomer engine in 1872.
9. Men employed in railway work — mostly navvies — figure in R. K. Webb's important article on working class literacy in the Victorian age: *English Historical Review*, lxv (1960), 333-51;
10. *Parliamentary Papers*, 1857, session 2, xxxvii, 145, 170. One still hears of drivers, regularly employed full time, who could not read or write, at least twenty years later: D. L. Smith, *Tales of the Glasgow & South Western Railway* (1970 ed.), 29.
11. We cannot be perfectly certain that he gave up his record at this point, for a large number of pages here have been torn out of the book. But the concluding paragraph, written below the entry for 30th November 1862, clearly indicates a termination.
12. A similar diary, kept by William Alvy, a Manchester, Sheffield & Lincolnshire Railway engineman, between January 1868 and January 1878, is in the National Railway Museum, York. □



Deltics at Waverley

Livery variations, for good or ill

These views demonstrate the weaknesses of the BR blue livery. Instead of performing the primary task of all liveries — accentuating the strengths of a machine's visual dynamics and disguising its weaknesses — it often does exactly the opposite. This was particularly true of the Deltics.

In the top view, taken in August 1965, D9001 is in two-tone green, original except for the addition of the small yellow warning panels. The cast metal nameplate has displaced the central BR emblem which now appears, smaller, under each cab. The most important visual element is the pale green body stripe. Most modern locomotives present the stylist with a serious design problem — with a driving cab at both ends, they appear, visually, to be going in both directions at once. The pale green stripe, a basic but effective device, helped reduce this visual conflict by 'tying' both ends together. It also accentuated the engine's length, and thrust; equally important, it reduced its apparent depth.

In contrast, the October 1970 view shows the much more basic corporate blue introduced in 1965. The Deltics were imposing but scarcely elegant machines and 9006's 'hunched', slab-sided appearance is unrelieved by a continuous body stripe. The yellow warning panels have been extended onto the loco's sides; they draw increased attention to both ends as they were designed to do, but visually split the Deltic body into three sections vertically — rear, centre, front. The contrasting cab window surrounds on the early livery, welcome detailing, have gone and the red nameplate background is not 'picked up' in the red of the old style BR emblem and thus looks isolated.

The colour blue has high visual impact — the eye tends to 'see it first' (hence its use on emergency flashing lights, road signs, etc) but it is also cold and uninviting, not entirely appropriate for a transport system dependent on the goodwill of its users.

Photos: James D. Cameron
Text: Lewis Reade

Where steam meets the sea

By Southern Waters

TOP: 02 0-4-4T No.14 *Fishbourne* **at Ryde Pier Head, departing on what was once, in fare per mile, the world's most expensive railway journey. When the LBSC and LSWR opened their joint Isle of Wight line in 1880, complete with new Ryde pier, they initially charged 7d for the pier-length journey from Pier Head to Esplanade and the same again from Esplanade to Ryde St Johns. At grouping, the Southern reduced the fares to 1½d and 2½d, respectively. In 1966, rebuilding at Pier Head reduced the platforms from four to two, served by ex-LT electric stock. In this 22nd July 1965 picture, the paddlesteamer** *Sandown* **departs for Portsmouth.** Photo: R. H. Leslie

ABOVE: Bird's eye view of a speeding Weymouth express, with WC rebuilt Pacific 34032 *Camelford* **in charge, at Hamworthy on 24th September 1966.** Photo: P. Tatlow

Under the ER Wires

Words and pictures
R. C. RILEY

RIGHT: B1 4-6-0 61284 climbs Bethnal Green bank, 28th February 1959, with the 12.24 pm Liverpool Street-Cambridge train. In the foreground is EMU set No.28 of the stock built for the 1949 Shenfield electrification. Later renumbered 028 and allocated BR Class 306 these units were converted from 1,500 volts DC to 25,000 volts AC in 1960-1. They were withdrawn at the end of 1981 apart from Set 017, which has been restored to original green livery by the staff of Ilford Maintenance Depot.

BELOW: B17/6 4-6-0 61666 *Nottingham Forest* **backs down to the East Side of Liverpool Street station, 2nd May 1958, preparatory to working the 3.36 pm Clacton departure. In 1947 Colchester shed had an allocation of six Thompson Class B2 4-6-0s for the Clacton trains. These two cylinder rebuilds of Class B17 were unpopular and by 1956 had been replaced by unrebuilt members of the class. The first 48 engines were named after stately homes on the LNER, the pioneer engine** *Sandringham* **giving its name to the class. The 25 engines named after football teams went initially to the GC Section, having tenders too long for GE Section turntables. In BR days, by which time longer turntables had been installed, the class was concentrated on the GE Section.** *Nottingham Forest* **survived until 1960 when the class became extinct.**

Lined Black

OPPOSITE, TOP: In the early nationalisation period, mixed traffic lined black was adopted for the GWR Halls but replaced by lined Brunswick Green from summer 1955. Some observers felt that no Swindon tender engine looked 'right' unless it wore green, others were confident that the machines were elegant enough to carry any colour with aplomb. Certainly, in ex-works condition, a GWR 4-6-0 could look striking, as exemplified here by 4969 *Shrugborough Hall* drifting through Corsham station on a running-in turn after major overhaul in 1953. Photo: P. M. Alexander/Millbrook House Collection

OPPOSITE, BOTTOM: Uppingham station on 25th June 1958, with 4-4-2T 41975. The coach is a push and pull driving trailer, although not in use as such. The LNWR branch between Uppingham and Seaton was more accustomed to push and pull fitted LNWR 2-4-2Ts until their withdrawal in the mid 1950s. Allocated to Rugby and outstationed at the single road timber engine shed at Seaton, they were replaced by Ivatt 2MT 2-6-2Ts, often 41214 or 41278.

Some services ran from the MR shed at Peterborough Spital Bridge, transferred to BR (ER) as early as 1950. The shed retained predominantly LMR engines but ex-GNR C12 4-4-2Ts did appear and worked over the Uppingham branch.

Displaced by 2-6-4Ts on the LTS Section, several of that line's 4-4-2Ts were transferred to the GER sheds at Southend or Stratford. A few, in better condition, were fitted with GER type injectors and of these 41949 and 41975 were transferred to Colchester. Displaced from there by DMUs they arrived at Spital Bridge in early 1958, hence their working at Uppingham.

41975 was withdrawn the following year. It was one of the last batch of 4-4-2Ts built for the LTS Section, having been completed at Derby Works in 1930. The class became extinct in 1960, and the Uppingham branch closed to passengers the same year. Freight services ceased four years later. Photo: R. C. Riley

ABOVE: The end of steam at Stratford, hub of the GE system (detailed in BACKTRACK Vol.1 No.1) is portrayed here by LNER 4-6-0 61156 on that shed in September 1962. The B1 worked the last steam hauled passenger train into Liverpool Street and upon Stratford's subsequent closure to steam was transferred to March. The Thompson B1s carried a variety of liveries between their introduction in 1942 and nationalisation, from black, lined with red, to LNER passenger green, fully lined out. In June 1948, however, Stratford Works turned out the first of the class to carry BR black, lined out on tender and cab sides with red, cream and grey, and on boiler and cylinder casings in red only. This became the standard livery for the class. Photo: Roy Hobbs

Ex-works engines in lined black; the railway offered few finer spectacles

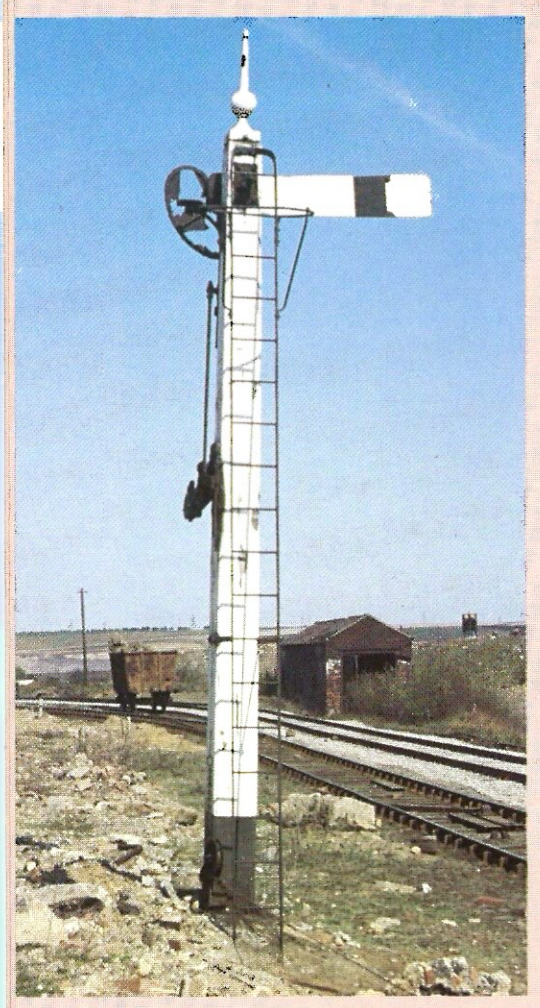
Photographed and described by
S. C. DENT

SEMAPHORES

RIGHT: The Melton Ross down goods distant, photographed on 18th August 1975. Of Great Central origin, its post and arm are both of wood. Melton Ross sidings box was situated between Barnetby and Brocklesby stations on the Doncaster-Grimsby line.

BELOW, LEFT: The British Steel Corporation's private railway (formerly Richard, Thomas & Baldwin) at Dawes Lane, between Crosby mines (where it joined the North Lindsey Light Railway) and Appleby Frodingham. The system was signalled by semaphores of widely disparate design. This wooden posted signal also has a wooden arm and has lost its spectacle glasses. BSC ore trains run from Winterton mines to Appleby Frodingham and the railway was once also used to transport hot metal from now closed Normanby Park steelworks. An 11th June 1976 picture.

BELOW, RIGHT: Standard BR upper quadrants — Treeton Junction down home signals in August 1980. The box, however, is of Midland origin and was sited between Chesterfield Tapton Junction and Rotherham Masborough at the junction for the Tinsley branch. The track was quadruple at this point. The left hand arms of each pair of signals control access to the branch from, respectively, the down goods and down main. Sheffield power box has today rendered both box and semaphores redundant and they have disappeared.



TOP: Irish practice. Lower quadrant wooden posted signals at Londonderry Waterside, originally Belfast & Northern Counties, later Midland (Northern Counties Committee). The signals are somersault type, similar to those used by the Barry and Great Northern railways. Note the tall spiked finials and calling-on arms below the main arms. Since this view was taken, on 11th May 1979, a new station has been built and colour lights have replaced the semaphores.

ABOVE: A fine array of Great Western lower quadrants dating from the early 1940s at Westbury on the 'Berks & Hants', 4th October 1978. The posts are of tubular steel with ball type finials and metal arms. A power box has since been installed at Westbury, junction for lines to Bristol and Salisbury.

ABOVE: King Arthur Class 4-6-0 30793 *Sir Ontzlake* **at Eastleigh shed, 25th August 1957, having emerged from general overhaul at the works. This was the pioneer of the last series of the class, these having 6-wheeled 3,500 gallon tenders for the Brighton Section. On the 1933 electrification of the Brighton main line it was transferred to the Eastern Section, subsequently ending its days on former LSWR lines. Between 1959 and 1962, when it was withdrawn (the class becoming extinct the same year) it ran with an 8-wheeled tender. In the background is the coaling stage and to its left the equally large water tower dating back to the opening of the shed in 1903.** Photo: R. C. Riley

MAUNSELL 4·6·0s

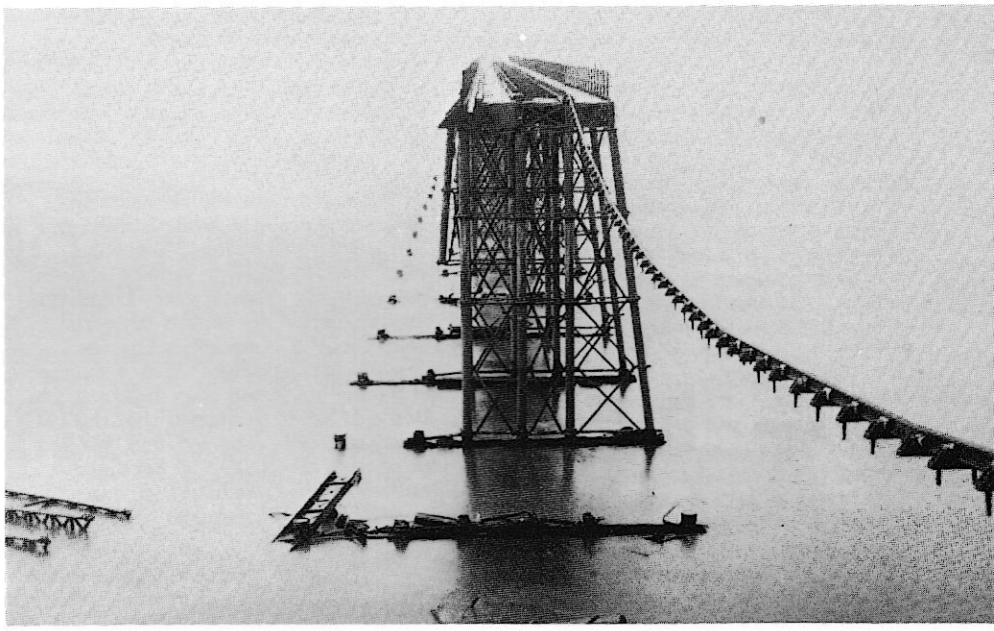
OF THE SOUTHERN

BELOW: In 1950, when Heathrow Airport still consisted largely of prefabricated buildings, BR still had sufficient faith in seaborne travel to build an extravagant Ocean Terminal at Southampton Docks. Later, instead of being described as Ocean Liner Expresses the boat trains to and from Waterloo were known by the name of the shipping line served, new engine headboards being introduced in 1954. Soon after, Lord Nelson 30857 *Lord Howe* **was recorded at the Ocean Terminal with the Cunarder. The two luggage vans, one of LMS and one of GWR origin, and the number of Pullman cars indicate the main train serving either the** *Queen Mary* **or the** *Queen Elizabeth*. **The use of Pullmans on ocean liner trains ceased in 1963 and the Ocean Terminal has since been demolished.** Photo: P. M. Alexander/Millbrook House Collection

Annan and the Solway Viaduct

A border backwater and its forgotten viaduct

A. J. MULLAY



Two views of the Solway Viaduct taken on 1st November 1881 after 45 of its supports had been demolished by ice floes. Photos: Scottish Record Office

Annan is not a name which figures largely in the story of Britain's railways, yet this small town in Dumfriesshire, Scotland, has much to commend it to the railway historian.

Situated only eight miles from the border at Gretna Green, Annan was once in even closer contact with England, thanks to its train service over one of Britain's greatest estuarine viaducts, connecting with Cumberland approximately a mile from the Dumfriesshire foreshore. In fact, the Solway Viaduct, dismantled over fifty years ago, was one of the most important civil engineering constructions to vanish from the British landscape.

The Solway Viaduct has rarely received the attention it deserves from rail historians. Five years in the building, this mile-long structure carried a single track some thirty-five feet above low water in this deceptively calm estuary. Scottish engineer James Brunlees (1816-1882) designed a low structure of 193 piers, with an average span of thirty feet between them, requiring the use of nearly 5,000 tons of wrought and cast iron, and with foundations sunk to a depth of forty feet.

The viaduct was undoubtedly one to seize the imagination, and may have had a seminal effect on British rail history. Scottish historian John Thomas described it as "the most exciting rail link between Scotland and England" and Dumfriesshire writer Thomas Jackson believed that its construction acted as a spur for the bridging of the great firths of Tay and Forth. Bearing in mind the fate of the first Tay Bridge, Jackson writes graphically of the courage required by crews working heavy mineral trains across the estuary on dark stormy evenings "in full knowledge that not far beneath them lay the treacherous waters of the Solway with its fast-flowing tides".

Originally promoted by the Solway Junction Railway, which planned to transport Cumberland ore to the smelters of Lanarkshire, the viaduct and its connecting lines attracted investment from the Caledonian Railway, never slow to stretch its fingers into the heartland of its rival, the Glasgow & South Western. Thirty-one years after the SJR had been incorported by Act of Parliament, it finally amalgamated with the Caledonian in 1895, the larger company having operated trains from the beginning of operations in 1869.

The viaduct was Britain's — indeed, Europe's — longest at the time of its construction, being some four times as long as Brunlees's previous longest, the Leven Viaduct on the Furness Railway's Carnforth-Ulverstone line. Construction had begun, and the piers of the viaduct were actually being sunk, when in 1864 the SJR were shocked to receive an instruction from the Board of Trade to leave room for a 60 foot swing bridge to be incorporated. Brunlees protested that this would involve building a movable section no less than fifty yards long (sixty feet on each side of a pivotal section) and little imagination would be required to envisage the difficulties of opening this in bad weather. All this to allow marine traffic up to the near-moribund harbour at Port Carlisle, the western end of the canal (from there eastwards to Carlisle) already having been filled in by the NBR.

The company minutes record that the SJR stalled the Board while its directors attempted to persuade Port Carlisle residents that their harbour had no future viability. One wonders how they approached this problem! But manage it they did, eventually guaranteeing to pick up the lease of the Port Carlisle Railway should the NBR allow it to lapse. In fact, the NBR were extremely helpful in this context, assuring the Board of Trade that the new company need not include an opening span. At one time the NBR hoped for running-powers across the viaduct, possibly on to a new branch to Annan Waterfoot, and enquired about placing its own staff at Annan (Shawhill).

North from the Solway Viaduct a single line connected with the west coast (Caledonian) main line at Kirtlebridge some seven miles to the north. Annan, the only major town in the area, was to be served by Shawhill station on the north eastern edge of that town. Additionally, there was a 32 chain spur from the Solway Viaduct line to the GSWR main line a

quarter of a mile east of the latter company's Annan station. On the southern shore the SJR established running powers over three miles of the NBR Silloth branch from Kirkbride to Abbey Junction before connecting with Brayton on the Maryport and Carlisle line.

One writer has claimed that four locomotives appear to have been supplied to the SJR at its time of opening to freight in 1869 and to passengers the following year, although the company minutes merely record the loan of two Caledonian engines "to be maintained in good order by and at the expense of the SJR". These probably operated from a small depot at Kirtlebridge.

Although it handled 45,000 tons of ore in its first year, and in Edwardian times was crossed by three passenger trains each way per day, the Solway Junction Railway was beset by financial problems, many of them undoubtedly caused by the company's major construction. Severe weather conditions dogged the viaduct almost from its opening in 1870, and in 1881 forty-five of its supports were demolished by ice floes. One such floe was measured at over 240 square feet and was six feet thick.

This damage kept the structure out of commission for three years, but a more chronic problem was the scouring effect of the 12 knot currents on the viaduct's foundations. Large stones had to be tipped into the firth to protect the piers, creating a problem after demolition.

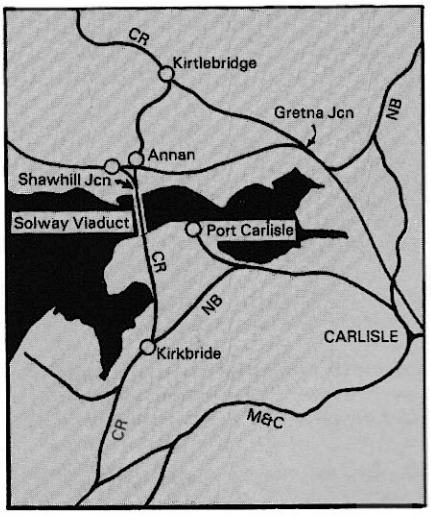
Early receipts, from the start of operations, were disappointing; when in 1870 the North British asked for £1,250 for running powers over the Kirkbride-Abbey section of their Silloth branch, half of this was met by the Caledonian, the other half by the SJR directors individually. Not long afterwards the company's secretary decided not to bank such traffic receipts as existed "in consequence of the trouble likely to arise from a seizure of the Company's monies by creditors", as the minutes record it with brutal frankness.

A wasting legal action was undertaken against the GSWR, because of allegations by the SJR that the former company was directing Ayrshire-Whitehaven fireclay cargoes through Carlisle instead of over the viaduct, as the sender had requested. The courts afforded little satisfaction for the struggling company, and it comes as no surprise to learn that in 1873 the Caledonian was allowed to purchase the section south from Kirtlebridge to Shawhill station (the latter being shared by the companies), for £86,439. In the circumstances, with the the viaduct still to experience the worst of what the weather could do, the only real surprise is the fact that the Junction company was not swallowed up by the Caledonian earlier than it was. This happened as late as 1st July 1895, being, on paper at least, an amalgamation between the two scarcely equal companies. For certain legal purposes the SJR company remained in existence until grouping in 1923.

There are frustratingly few records of operations over this unique line. One writer has claimed that the large Caledonian outside cylinder 4-6-0s frequently worked over the viaduct, suggesting that there were no clearance or weight problems. Unfortunately, the only photograph purporting to show a Pickersgill 4-4-0 with train crossing the estuary (reproduced in the Moorfoot publication The Last Trains 3) is almost certainly a fake (as the publisher agrees) produced by a commercial postcard company. Passenger services over the Solway were suspended during the First World War, resuming for only a short time thereafter, and were withdrawn between Annan (Shawhill) and Brayton from 1st September 1921. Freight traffic had already dwindled because of the cheap availability of imported Spanish ores, and the number of smelting works springing up in West Cumberland. Demolition of Solway Viaduct took place in 1934-5.

Even after this the viaduct's site was a problem for its owner since 1923, the London Midland & Scottish Railway. An artificial reef formed in the estuary where the stones remained after the viaduct piers had been removed or broken off by the demolition contractors. After a number of fishing boats had been damaged, the Board of Trade demanded that the LMS have the stones removed, and this had to be done laboriously by hand, using railway surfacemen equipped with waders, in the years up to the Second World War.

Nowadays only the embankments remain to show the former existence of Britain's forgotten viaduct. The northern section of the line closed to passengers in 1931 (mixed trains were a regular operating practice) with closure to freight following in February 1955, part of the Scottish viaduct embankment being used as a headshunt so that traffic from the ex-GSWR line could reach Shawhill from the south. The trackbed of much of the Kirtlebridge-Solway section is now occupied by a wastepipe emptying water from Chapel Cross nuclear power station into the Solway! The short spur connecting the line with the former GSWR main line at Solway Junction existed into the 1970s as a siding serving the (now defunct) crane and turntable-makers, John Boyd Ltd.



No train has crossed the Solway for nearly seventy years, and local memories now recall the viaduct only as an unofficial entry point into England for those Scots brave enough to risk the structure's dangerous condition after closure to sample the (comparatively) alcoholic delights of the English Sunday.

This was because the Annan area, in common with much of north west Cumberland and south east Dumfriesshire, became an important munitions centre with thousands of workers employed there, particularly in the First World War. So concerned was the then-government about the indiscriminate spending of the munition workers' wages on cheaply available alcohol that a State Licensing Board was set up, and its regulations continued in force until the 1970s. By that time the Solway Viaduct, that unofficial 'walkway' to the delights of England, had ceased to exist for forty years.

In September 1985 the remains of the Solway Viaduct piers were still visible on the English shore. Photo: J. L. Stevenson

But this is not the end of Annan's attractions for the railway historian. Annan's present day station, the surviving one of two in the town, is an attractive, if much deteriorated, example of 1840s railway architecture. With much of its business presently being carried out in portable cabins, the passenger has less opportunity than formerly to appreciate its period atmosphere. No longer graced by twice daily express services to London (St Pancras), the town has lost its link to the British capital city. It also once boasted access to the Scottish capital, as well as to Glasgow by two different routes. Not bad for a town of fewer than five thousand people (in 1951)!

Annan was on the periphery of the great 1840s argument as to how the Grand Junction Railway would continue northwards from Carlisle to reach Glasgow and Edinburgh approximately one hundred miles to the north. Engineer Joseph Locke favoured what was known as the Nithsdale route, effectively the later GSWR line from Carlisle to Glasgow via Annan, Dumfries and Kilmarnock. This avoided the major obstacle presented by the alternative Annandale route (some miles north of the town of Annan itself) striking directly north from Gretna Green through the Lowther hills by a tough northward gradient in the Beattock

Solway Junction, where (at left) a spur from the SJR joined the GSWR main line half a mile from the other Annan station — which is still open today. This c.1930 view shows a MR 4-4-0 Compound piloting an ex-GSWR 4-6-0 towards Carlisle; the main line has since been singled at this point. Photo: J. J. Cunningham

pass. The advantage offered by the latter route was, of course, a combined approach to the two cities in the Scottish lowlands by the construction of a junction in the Carnwath area (eventually, at Carstairs), and at one time Locke offered an alternative line from his suggested Annan-Dumfries-Thornhill route striking north eastwards through the Dalveen pass to connect Nithsdale with upper Clydesdale — anything to avoid Beattock.

As we know, in the end *both* of the original routes were built — the Caledonian heading north from Carlisle through some forty miles of pastoral Dumfriesshire before broaching ten miles of 1 in 75 on Beattock bank, and then running downhill beside the Clyde to Carstairs, while the 'Sou' Western' used running powers over the CR main line for the first nine miles out of Carlisle to Gretna (which incidentally, had no fewer than three stations at one time, the Caledonian and GSWR building their own stations respectively south and north of the 'frontier', and the NBR joining in with a branch from Longtown). From the bridge over the Sark, which forms the actual Anglo-Scottish border at this point, the GSWR enjoyed a twenty three mile dash westwards to Dumfries before turning northwards up the Nith valley to Kilmarnock and Glasgow or heading over the 'Long Road' to Stranraer.

Thus, the GSWR station in Annan was the town's 'main' station, its architecture earning it a place in O. S. Nock's and G. Biddle's *The Railway Heritage of Britain.* Described as "the best surviving early station in South West Scotland", the authors enthuse on the building's unusual bay window facing the station forecourt, and the 1840s roof with its projecting eaves.

On this author's last visit (August 1987), the bow window was boarded over and the glass platform canopy looked positively dangerous. Yet the recent Scottish Omnibuses strike had reinvigorated passenger receipts — but one suspects that the new passengers returned to bus travel as quickly as possible, rather than make use of the deteriorating station.

Your Edinburgh based author remembers, with undiminished affection, frequent visits to relatives in Annan in the steam hauled 1950s and early '60s. Born much too late to travel from Edinburgh (Princes Street) on a Carlisle-bound stopping train, and then changing to the SJR at Kirtlebridge for Shawhill, I was even too late for an interesting alternative — changing at Lockerbie for the former Caledonian branch to Dumfries (closed 1950), so SMT buses via Dumfries had to suffice.

A daily ritual was the sight of the Thames Clyde Express hauled by a Holbeck Royal Scot pull up in the station serving this town of 5,000 souls, then, on the station staff's instructions, pull clear of the starting signals and stop for a second time. This was to allow loading and unloading of the guard's van, the platform length on both up and down lines being insufficient for a single stop.

'Black Fives' and Jubilees figured largely on the stopping trains and the Glasgow-Leeds semi-fasts, while 'Crab' 2-6-0s appeared frequently on the freights. Ironically, the fast freights got through Annan without stopping, which was more than their daytime passenger counterparts were able to do! Delightfully, a veteran 2P 4-4-0 could often be seen shunting Annan goods sidings, and we know from the writings of the late GSWR historian D. L. Smith, that the local enginemen liked these locomotives so much they "would fair like to take them home with them!"

In later years A3s, transferred to the Settle-Carlisle main line, started to appear regularly on the long distance passenger services through Annan, before the diesel era settled in for good. However, as late as 1965, steam still made a brave showing on the north bank of the Solway, Kingmoor Britannias now being prominent. Nowadays, the line between Gretna and Annan is singled, nonsensically reducing its value as a deviation route for West Coast main line traffic.

But, for the time being, Annan continues to feature in BR timetables, even if it is off the Inter-City network. In contrast, the Solway Viaduct has long departed the scene, although one of its connecting lines is worth a footnote in recent railway history. York's National Railway Museum, the Mecca for the world's rail enthusiasts, is arranged around a turntable built by John Boyd of Annan. The table began its journey in sections to York over the connecting spur between the GSWR line and the Solway Junction Railway, only a few hundred yards from the site of the latter's now forgotten viaduct between Scotland and England. □

Former CR 4-4-0T 15027, built in 1893 to work on the underground lines out of Glasgow Central (Low Level), stands at Annan (Shawhill) with a single coach before leaving for Kirtlebridge, probably shortly before closure in 1931. This service northwards from Annan lasted some ten years longer than passenger services over the Solway Viaduct, about 1½ miles to the south. Photo: J. J. Cunningham

Two LNWR Termini

Described by **V. R. ANDERSON AND G. K. FOX**

ABOVE: CROXLEY GREEN. The erstwhile run around loop was made redundant by third rail electrification but remained to provide access to the goods yard with its unusually long sidings. The building seen here replaced an earlier structure destroyed by fire. The white palisade fencing is typical LNWR, and note the timber construction of the platform necessary for a station built on an embankment.

The Watford & Rickmansworth Railway, the first branch in that area of Hertfordshire, authorised by a July 1860 Act of Parliament, was the brainchild of Lord Ebury (Robert Grosvenor), who lived at nearby Moor Park. Construction commenced on 22nd November 1860 and the line opened to passengers on 1st October 1862. A further Act in 1861 had allowed for extension to Uxbridge but nothing came of this.

The single track WRR was worked from the start by the LNWR but remained in private ownership until 1881 when the LNWR purchased it from the then bankrupt company. An intermediate station was provided at Watford High Street.

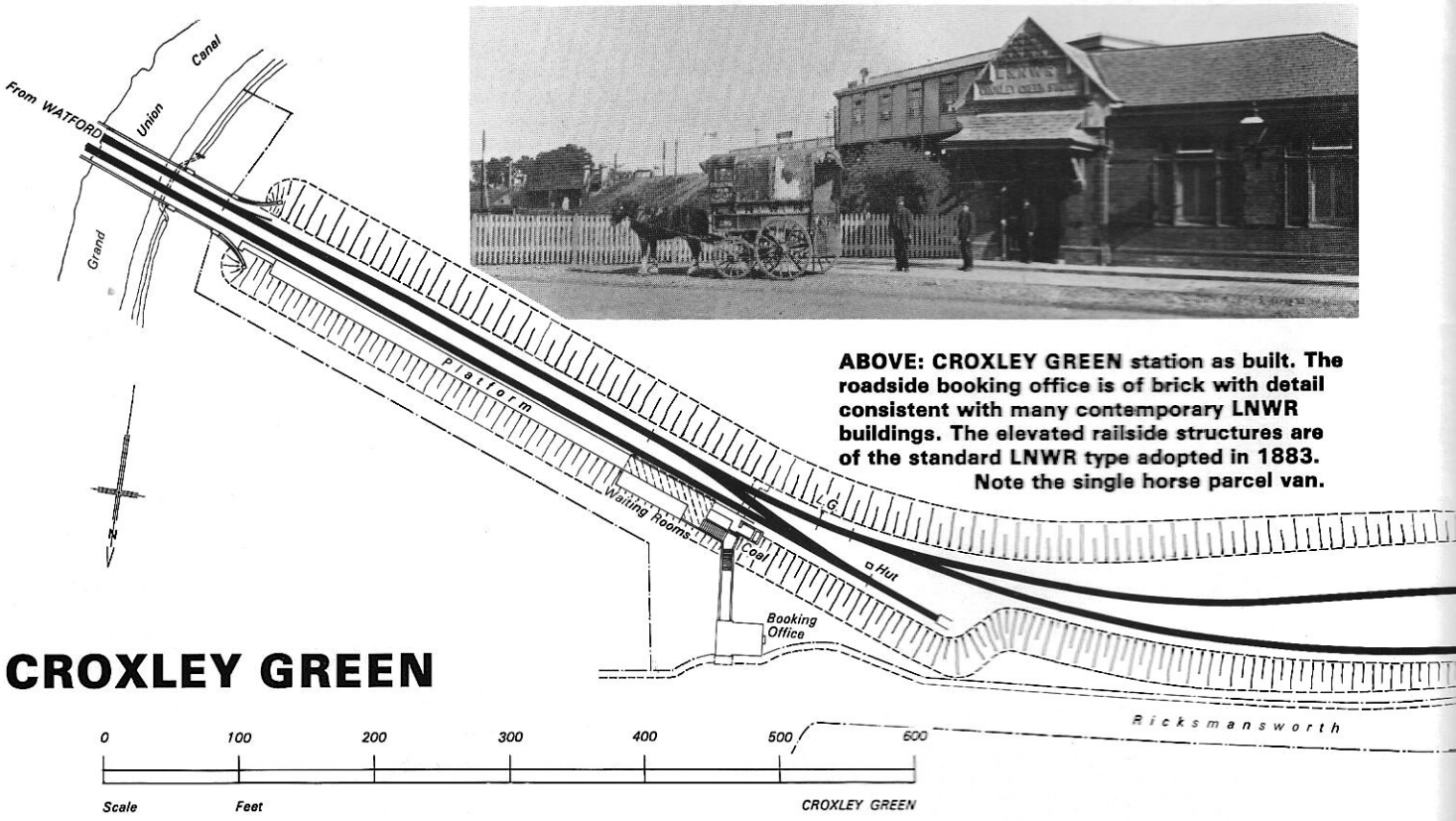
In 1907 the LNWR planned to electrify suburban services between Euston and Watford but it was not until 1911 that the first changes were made. A new branch, to Croxley Green, was constructed, leaving the WRR at Croxley Green Junction. It opened in 1912: 15th June for passenger traffic, 1st October to freight. There was an intermediate station at Watford West.

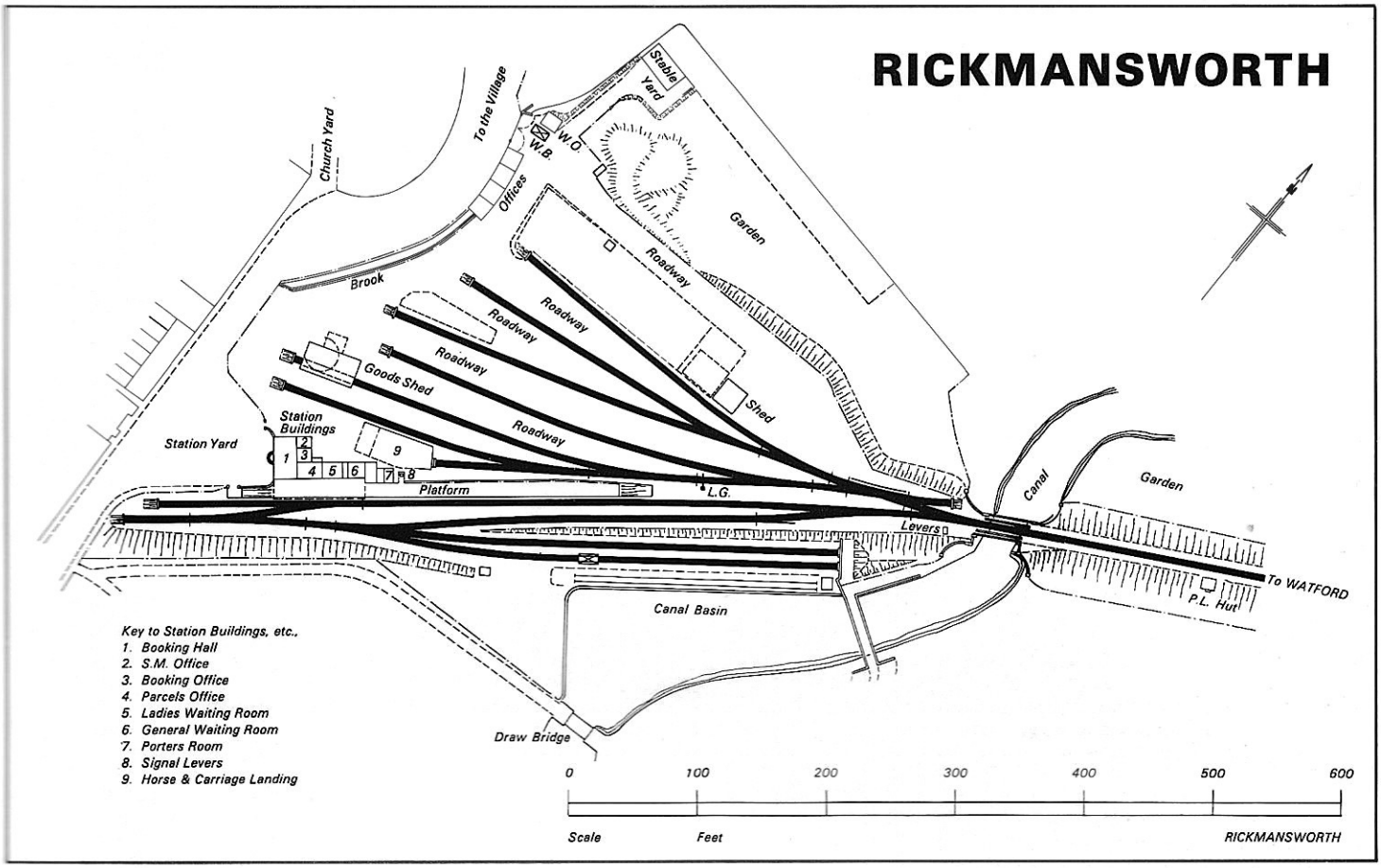
Track between Croxley Green Junction and Watford Junction was doubled to carry the extra branch traffic and a new station built at Watford High Street. A new suburban line from Euston came into operation on 10th February 1913, diverging from the main line at Bushey & Oxhey and making a junction with the WRR just southwest of Watford High Street station. An additional double track spur formed a triangular junction to allow through running from Croxley Green to Euston.

Initially, all trains were steam hauled but electric operation commenced on the Euston-Watford line on 16th April 1917, from which date trains of the London Electric Railway also used the line. The Croxley Green branch was electrified from 30th October 1922 and the Rickmansworth branch, 26th September 1927.

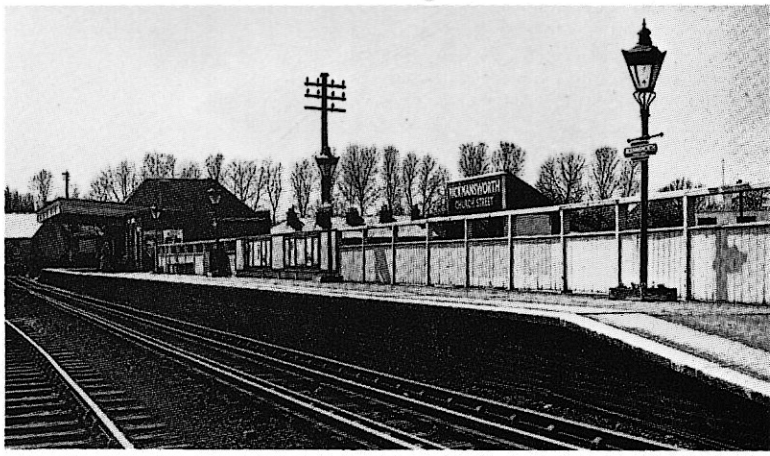
Passenger services were withdrawn from the Rickmansworth line on 3rd March 1952, freight continuing until 2nd January 1967. Croxley Green goods services ceased from 14th November 1966.

ABOVE: CROXLEY GREEN station as built. The roadside booking office is of brick with detail consistent with many contemporary LNWR buildings. The elevated railside structures are of the standard LNWR type adopted in 1883. Note the single horse parcel van.



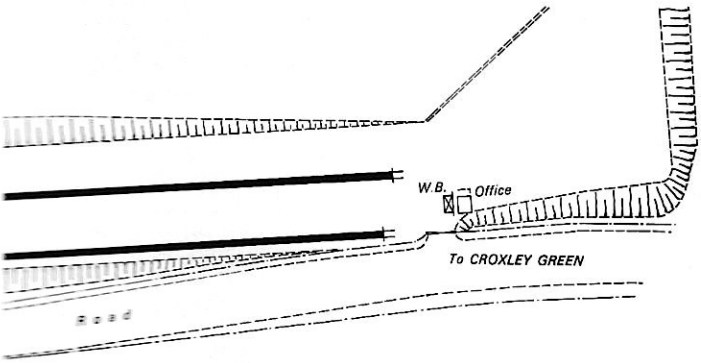


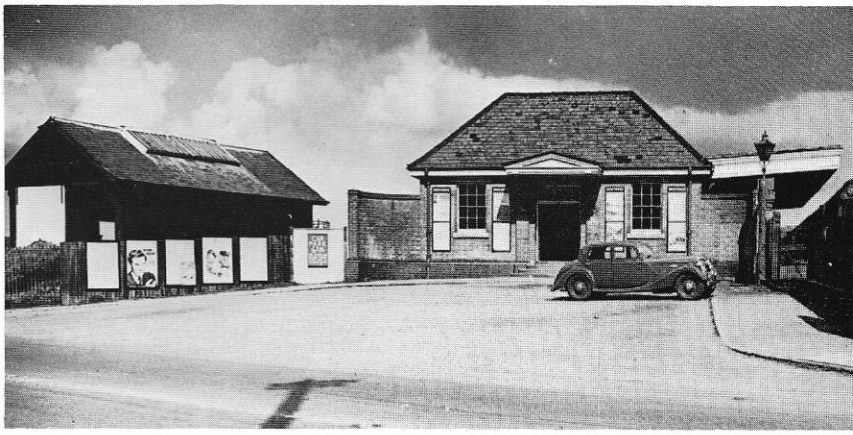
BELOW: The main station building at RICKMANSWORTH, adjacent to Church Street. The crossover in the foreground allowed access to a pair of sidings alongside the canal basin on a spur from the Grand Union Canal. A crane was provided at the Croxley basin for transhipment of goods.



ABOVE: RICKMANSWORTH. The closeboard LNWR style fencing hides the extensive goods yard. The small goods shed is partly hidden by the nameboard.

BELOW: RICKMANSWORTH Church Street station entrance and yard, with a clearer view of the timber goods shed. □





The first in a new series of edited extracts from the **GREAT WESTERN RAILWAY's GENERAL APPENDIX TO THE RULE BOOK**, *produced for the instruction of the company's employees*

Working the Severn Tunnel

Republished by kind permission of the British Rail Board

All photos: M. Mensing, at the east end of the tunnel

The following is taken primarily from Notice S1916 published at Bristol (TM) in April 1943, comprising twenty 6" x 9½" pages and cancelling instructions dating from 1932. The anti-gas precautions were issued jointly by Paddington and Swindon in October 1943.

LAMPS ON WALLS

The following white Lamps for both Lines are fixed on the Tunnel walls to indicate to the Enginemen that the Train is approaching the change of gradient in the centre of the Tunnel:— One Lamp on the left side, a quarter of a mile before reaching the point where the falling gradient changes to level, and two Lamps, one above the other, 40 yards before reaching the level. The lamps have two lenses, one to throw the light in the face of an approaching Train and the other to reflect it across the rails.

TRAIN LAMPS

Train and Guards' Lamps — All Trains must exhibit the usual lighted Head, Side, and Tail Lamps through the Tunnel by day as well as by night, and all Engines running light must exhibit the usual lighted Head and Tail Lamps.

Guards must light their Hand Lamps before reaching the Tunnel, and keep them lighted while running through.

All Passenger Trains working through the Severn Tunnel must be lighted for the passage through the Tunnel.

DIESEL CAR WORKING

Special precautions are necessary for the protection of permanent-way men and others on duty in the Tunnel in connection with the running of Diesel Cars through the Severn Tunnel. The electric horns and sirens on these cars have not the same carrying power as steam engine whistles, and in other respects the cars do not give the same warning of their approach as steam locomotives.

The following instructions must be strictly observed:—

1. Drivers of Diesel Cars must continue "pop" hooting while running through the whole length of the Severn Tunnel.

2. Diesel Cars must not pass through the Severn Tunnel *before* the scheduled time, which must not be varied until adequate notice has been given to all concerned.

3. Special trips with Diesel Cars, including the movement of cars from depot to depot for replacement or repair purposes and to Southall for periodical inspection, must not be run through the Severn Tunnel until notice has been circulated in ample time for all concerned to be warned.

RESTRICTIONS OF TRAFFIC, EXCEPTIONAL LOADS, ETC.

Traffic loaded on wagons which have been specially fitted by the Locomotive Department, steam rollers, traction engines, boilers, or other similar articles exceeding 15 tons actual machine weight, traffic exceeding 70 feet in length or requiring more than two wagons for the bearing of the load (except a wagon to act as a runner at each end) *must not be worked through the Tunnel.* Vehicles containing steam rollers, traction engines, boilers, or other similar articles on Trains working through the Severn Tunnel must have the actual machine weight clearly marked on the label. Single bolster wagons *must not be worked loaded through the Severn Tunnel.*

TECHNICAL

As a special war time measure military traffic such as heavy tanks and guns exceeding 15 tons but not exceeding 52 tons in weight, may, however, be permitted to work through the tunnel ("Crocodile L" excepted), provided the vehicles on which they are loaded are formed in purely military trains, and not as single units in other passenger or freight trains. Before these special loads, exceeding the provisions laid down in the previous paragraph, pass through the tunnel, they must be specially examined for security of loading, couplings, etc., by the Carriage Department Examiners at Stoke Gifford, North Somerset Junction, West Depot, St. Philip's Marsh, or Severn Tunnel Junction, and the trains must be stopped specially for this purpose.

LEFT: The working practices defined in the 1936 Rule Book remained current, with amendments, into the 1960s. This 9th May 1958 view shows one of the scheduled Severn Tunnel Junction-Pilning car carrier workings climbing from the tunnel with 2-6-2T 6119 in charge. Before departure, car engines were run until the carburettor was clear of petrol and the secure fit of fuel filler caps was checked.

BELOW: The same day and location: 2-6-2T 4137 and 2-8-0 2860 on an up freight pass 2-6-2T 4127 and 2-6-0 6386 on a similar down working.

Steam travelling cranes with the jib properly secured on a specially constructed match truck fitted with roller on which the jib can rest and traverse, may pass through the Tunnel with the jib leading or trailing. Trains on which these cranes are conveyed whether ordinary Freight Trains or Special Trains, must not exceed a speed of 25 m.p.h. through the Tunnel. The Inspector at the last Depot at which a Train calls before reaching the Tunnel will be held responsible for instructing the Trainmen not to exceed the restricted speed through the Tunnel, and the Guard of the Train must see that the Driver is advised that the crane is on his Train. Other steam cranes and hand cranes must not be allowed to pass through the Severn Tunnel, except on Trains specially arranged for the purpose, and provided the crane is properly adjusted for travelling, and the jib is pointing towards the rear of the Train, but the speed of the Train conveying such vehicles must be limited to 25 miles an hour through the Tunnel.

Timber, deals, rails, and other similar traffic which require to be loaded over the end of the wagon may be taken through the Tunnel with the high end of the load pointing towards the Engine, provided the load is securely roped and the overhang is not more than two feet, measured from the outside of the end plank of the wagon on which the load is being carried and that the weight is not thrown unduly on one end of the truck, to interfere with its bearings.

Bolster wagons loaded with timber, *must not be worked through the Tunnel* when the load extends above the tops of the stanchions. This restriction will not apply to telegraph poles and similar traffic loaded above the stanchion level at the centre of the vehicle, provided the load at the sides does not extend above the tops of the stanchions and that the loads are always properly and efficiently secured by the binding chains.

"Dead" Engines (whether G.W., Foreign or privately owned) are prohibited from passing through the Severn Tunnel.

SPEED OF TRAINS

Passenger Trains — Passenger Trains must not pass through the Severn Tunnel in less than six minutes.

Freight Trains must in all cases enter the Severn Tunnel at a speed not exceeding 12 miles an hour, but the Distant Signals will be lowered for such trains when possible. Whilst running on the descending gradient the speed must not, at any point, exceed 30 miles an hour.

Controlling Speed of Freight Trains down Inclines — In order to work Trains through the Tunnel with safety, it is most important to control the speed when running down the gradient towards the middle of the Tunnel, and the brake of the van must be applied with care immediately the Train is over the brow of the Incline at Pilning and Severn Tunnel Junction, and be kept hard on while descending the Incline, so as to keep tight as many couplings as possible. The speed, which must be regulated by the Enginemen, must not exceed that shewn above.

Guards of Up Coal Trains are specially instructed to apply their Hand Brakes carefully when descending the Incline from Severn Tunnel West end to the level at the centre of Tunnel, to avoid the Drivers of Assistant Engines having to apply their brakes unduly in front.

Should the Brake Van not hold the Train so as to control the speeds down the Incline, as shewn in above, the Driver or Drivers must apply their brake or brakes, and should it be necessary to do so the Engine brake or brakes must be eased off gradually before passing the single light in order that tight couplings may be maintained, and steam must be put on steadily before reaching the double lights. The Guard should also, as a rule, keep his Van Brake on tightly until the rear of the Train has passed from the level on to the ascending gradient, when it should be eased off gradually.

The Guard must remain near his brake during the whole time the Train is approaching and running through the Tunnel, so that he may be ready to act at once in case of emergency.

Action to be taken by Signalman if

Train is delayed in Tunnel — The Signalman must carefully record the time of each Train when it enters the Tunnel, and, except in the case of an Inspection Train or Ballast Train having to stop to do work in the Tunnel, if it is not seen or heard approaching within the following times, viz:—

Passenger Trains . . . 10 minutes
Perishable Trains . . . 15 minutes
Freight Trains . . . . . 20 minutes

after "Train entering Section" has been received, he must not allow a Train in the opposite direction to enter the Tunnel until the delayed Train has arrived, or he has ascertained why it has not arrived, and not even then until he is satisfied that it is safe for the Train specially stopped to go forward.

FREIGHT TRAIN LOADS

No Up Train through the Severn Tunnel must consist of more than 2 engines, 60 12-ton wagons and van or the equivalent in length.

No Down Train through the Severn Tunnel must consist of more than 2 Engines, 65 twelve-ton wagons and van or the equivalent in length.

BELOW: 9th May 1958 again and 2-6-2T 6114 and 2-8-0 2894 get to grips with an up freight. The gradient at this point is 1 in 100, steepening to 1 in 68 between Pilning Junction and Patchway. The climb from the west of the tunnel is 1 in 90; near its centre, the line is level for about 12 chains.

EXAMINATION OF FREIGHT TRAINS

The examination of Freight trains passing through the Severn Tunnel by Carriage and Wagon Examiners will be carried out as follows:—

Wagon examiners at the last examining point before reaching Severn Tunnel must exercise the greatest care in examining the wagons formed in trains to run through the Tunnel in order to avoid the possibility of vehicles unfit to run being sent away on a train.

Guards working trains required to pass through the Severn Tunnel must not allow their trains to leave the examination points enumerated until the Wagon Examiner has completed his examination, and until they have received from him a verbal assurance to that effect.

It will be the duty of the Guard of each train to specially examine the loading of every wagon on his train before leaving Severn Tunnel Junction with an Up train, and Pilning with a Down train, in order to satisfy himself that the loads are thoroughly secure and safe to travel. Special attention must be given to the security of the load, door fastenings and sheet ties. A Guard will be on duty continuously at Severn Tunnel Junction Middle to assist the Train Guards in the examination of the loads, the Train Guard taking the right hand side of the train in the direction in which it is proceeding whilst the second Guard examines the other side. In the absence of the second Guard the Train Guard must proceed to examine the train on both sides. A supply of sheet ties must be kept at the Tunnel Inspector's Office at Pilning and in the Van Equippers' room at the East end of the Severn Tunnel Junction Yard.

TRAINS STOPPED IN THE TUNNEL BY ACCIDENT OR OTHERWISE

Alarm Wire and Electric Tell-Tale Bells — In order that immediate notice may be given to the Signalman at each end of the Tunnel, in the event of any accident occurring, or a Train coming accidentally to a stand in the Tunnel, a special Insulated Wire has been fixed to the wall of the Tunnel on the *Up side* of the Line about 5 feet from the ground. This wire is connected with a Tell-Tale Bell in the Signal Box at each end of the Tunnel, in such a way that upon the wire being cut or broken the bells will commence ringing, and thus the Signalman at each Box will be made aware that something has happened and he must prevent another Train entering the Tunnel.

In the event of *any train* coming to a stand in the Tunnel *under any* circumstances, except by reason of the Intermediate Block Home Signal being at "Danger", or when specially authorised to do so, the Guard must *before ascertaining the cause,* immediately cut or break the wire. If "train on line" has been sent for only one line in the tunnel, the Signalman at the end of the Tunnel to which the Train in question is proceeding, on being warned by the Tell-Tale Bell ringing, must not allow any Train or Engine (except an Engine to render assistance in case of accident) to enter the Tunnel on the opposite line until he is satisfied

that the line is free from obstruction, and that the Train can pass through safely. The Signalman at the end of the Tunnel at which the Train in question entered, on being warned by the ringing of the Tell-Tale Bell, must immediately send the "Obstruction Danger" Signal if a Train has not passed the Intermediate Block Home Signal for the opposite line, and set and keep the Block Instrument to "Train on line" until he has been advised that Trains can go forward, when the ordinary working of the opposite line can be resumed. The Signalmen at both ends of the Tunnel, immediately the Tell-Tale Bell rings, must place their Intermediate Home Signals at "Danger" if the signals are not already in that position.

The person who severs the wire must not leave the loose ends hanging down, but must coil each end into a large loop in such a manner that the metal inside the insulation will not touch the ground or the wet wall. If it does so the Bell in the Signal Box will cease ringing just as though the wire had not been severed. The person who has to sever the wire must do so at the place at which he first begins to cut it.

If the Engineering Department Staff, or other Workmen engaged in the Tunnel, find any obstruction upon the rails, or other circumstance which renders it unsafe for a Train to enter the Tunnel; or if a Light Engine fails or comes to a stand, the Engineering Department Staff, Workmen, or Driver, as the case may be, must cut or break the wire in the same way as the Guard is directed to do in the Clause above.

A "D.S." message must in all such cases be sent immediately by the Signalman in the Tunnel West Box to the Telegraph Lineman at Severn Tunnel Junction informing him that the wire has been broken, and the latter must take steps as quickly as possible to repair it, and after he has done so he must advise the Signalman at the nearest Box, who must then advise the Signalman at the other end accordingly.

While the "Alarm" Wire remains unrepaired, all Trains must be brought to a stand at the Box before entering the Tunnel, and the Signalman there — after he has advised the Driver and Guard that the "Alarm" Wire is broken, so that they may be prepared to adopt the necessary precautions in the event of anything happening to their Train while running through the Tunnel — must allow the Train to enter the Tunnel.

Guards and Drivers must not depend upon this wire for the protection of their Trains in the Tunnel, but must in all cases act upon the instructions laid down for the protection of their Trains where there is no such special "Alarm" Wire provided.

The Tell-Tale wire is extended to Sudbrook Pumping Station, in order that the Signalmen may be immediately advised of enemy action resulting in the immobilisation of the Sudbrook Pumping Station, when the staff at the Pumping Station must sever the Tell-Tale wire which has been looped up the shaft of the tunnel. This will set ringing the alarm bells in the signal boxes and the Signalmen will stop trains entering the Tunnel until it has been ascertained that it is safe for traffic to be resumed.

The Pumping Station staff will, as soon as possible, communicate with the Signalmen by means of the telephone on the Tunnel circuit and inform them what has happened and whether traffic can be resumed or should be suspended. A daily test of the Sudbrook Pumping Station extensions of the Tell-Tale telephone, must be made with East and West Boxes at 10.0 a.m.

ABOVE: 4084 *Aberystwyth Castle* **heads the 11.00 am Swansea-Penzance towards Pilning on 28th September 1959. BELOW: The same day and 4289 draws a down freight up to the signal on the descent to the tunnel.**

Working Permanent Way Trolleys through Tunnel — A Trolley must not, under any circumstances, be taken into the Tunnel at either end without the permission of the Signalman, and it must always work on the proper running line only.

Permanent Way Men Working in Tunnel — The Ganger in charge of the work to be carried out, who is responsible for sending back the Hand-signalmen, must not commence such work until he has ascertained on the nearest telephone that the Hand-signalman has reached the Signal Box in the direction in which he is sent.

On arrival at the Signal Box, the Handsignalman must inform the Signalman of the intended obstruction, and the Signalman must keep the Line on which it will exist blocked until he is advised that the work has been completed and the Handsignalman has been recalled.

Ballast Trains and Engineers' Inspection Trains — Ballast Trains must never be stopped in the Tunnel except upon an order from the Divisional Superintendent.

In the event of war gases being used by the enemy, special precautions will be necessary to prevent the gas being introduced into the Severn Tunnel through the ventilating shaft at Sudbrook.

The Regional Commissioner, Cardiff (No.8 Region), will advise Sudbrook Pumping Station by telephone giving warning of a gas attack, and the density of the gas, immediately he receives the information through his existing organisation.

The Manager of the Sudbrook Pumping Station will also act on his own initiative if the presence of poison gas in the vicinity of the shaft is suspected.

A number of the Pumping Station personnel on each shift have been trained in anti-gas measures. Regular practices will be carried out by the Pumping Station staff wearing anti-gas equipment whilst performing their normal duties.

Decontamination of the area surrounding the Pumping Station will be carried out by the Chief Mechanical Engineer's staff as necessary.

Immediately a gas warning is received the Severn Tunnel ventilating fan must be stopped. A person will be detailed on each shift whose duty it will be to telephone the Signalmen at Severn Tunnel East and West Boxes by means of the direct telephone, informing them that the fan has been stopped owing to the presence of poison gas. The tell-tale wire must not be severed owing to circumstances necessitating the carrying out of anti-gas measures as it must be available for use in case of accident as laid down in the Severn Tunnel Instructions. □

A rather special (and rather unsuccessful) locomotive, remembered by **KEN HOOLE**

'Hush-Hush'

In 1924 the first large engine with a water tube boiler was built in America and in the same year H. N. Gresley, CME of the LNER, approached Yarrow & Co., builders of water tube boilers for marine use, with a view to fitting one to a locomotive. Various proposals were considered, the final decision falling on a 4-6-4 engine with two high-pressure and two low-pressure cylinders. The boiler pressure was 450 lb per sq in.

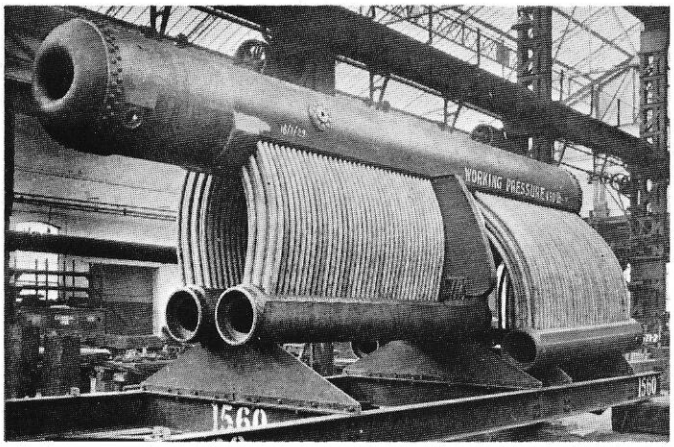
The boiler consisted of a steam drum along the top, with four banks of water tubes connecting it to water drums at the bottom of the tubes on each side. The firebox was built inside the rear sets of tubes.

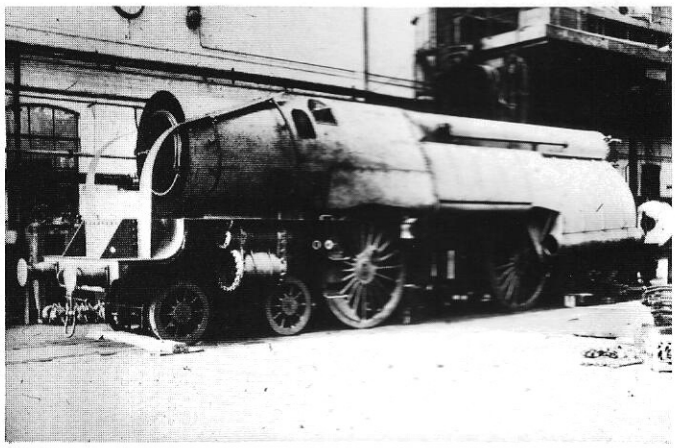
The LMS was also experimenting with a high-pressure locomotive and because of the rivalry between the two companies, the LNER engine was built under conditions of secrecy, therefore becoming known at Darlington as the 'Hush-hush' engine, a name which found general use.

LNER 10000 was completed at Darlington Works in December 1929, with frames made at that works, the boiler constructed by Yarrow of Glasgow and the tender built at Doncaster Works! Although the 4-6-4 locomotive put in some good work in the years it spent working from Gateshead shed, it gave considerable trouble and numerous modifications were tried to overcome the difficulties, which were due largely to steaming problems. In its water tube form, 10000 was in use from December 1929 to August 1935, some 5¾ years, during which it was in Darlington Works for approximately 3 years, not to mention the time spent undergoing repairs at Gateshead shed. It was also unavailable for traffic on numerous occasions when it was travelling to, or on exhibition at, railway displays at various centres.

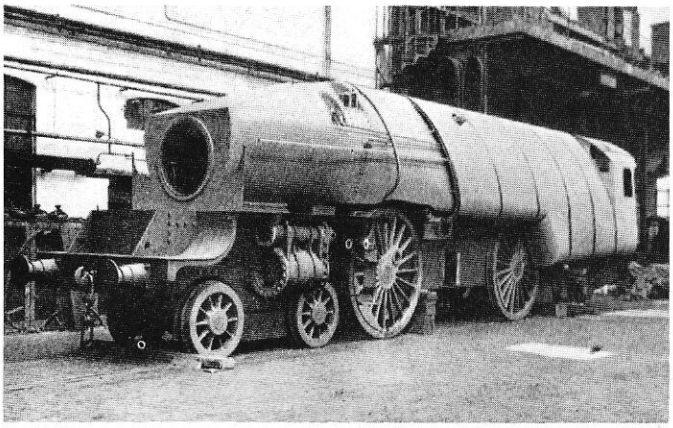
The engine returned to Darlington for the last time on 21st August 1935 but development work had ceased and it stood in abeyance until sent to Doncaster on 13th October 1936 where, in the following year, it was rebuilt with a locomotive type boiler. The water tube boiler was eventually returned to Darlington and installed in Stooperdale Boiler Shop, providing steam to test new and repaired boilers before they were put into traffic.

The rebuilt engine worked into the nationalisation period, being renumbered 60700. It was scrapped in 1959. This photo feature shows it in LNER condition.



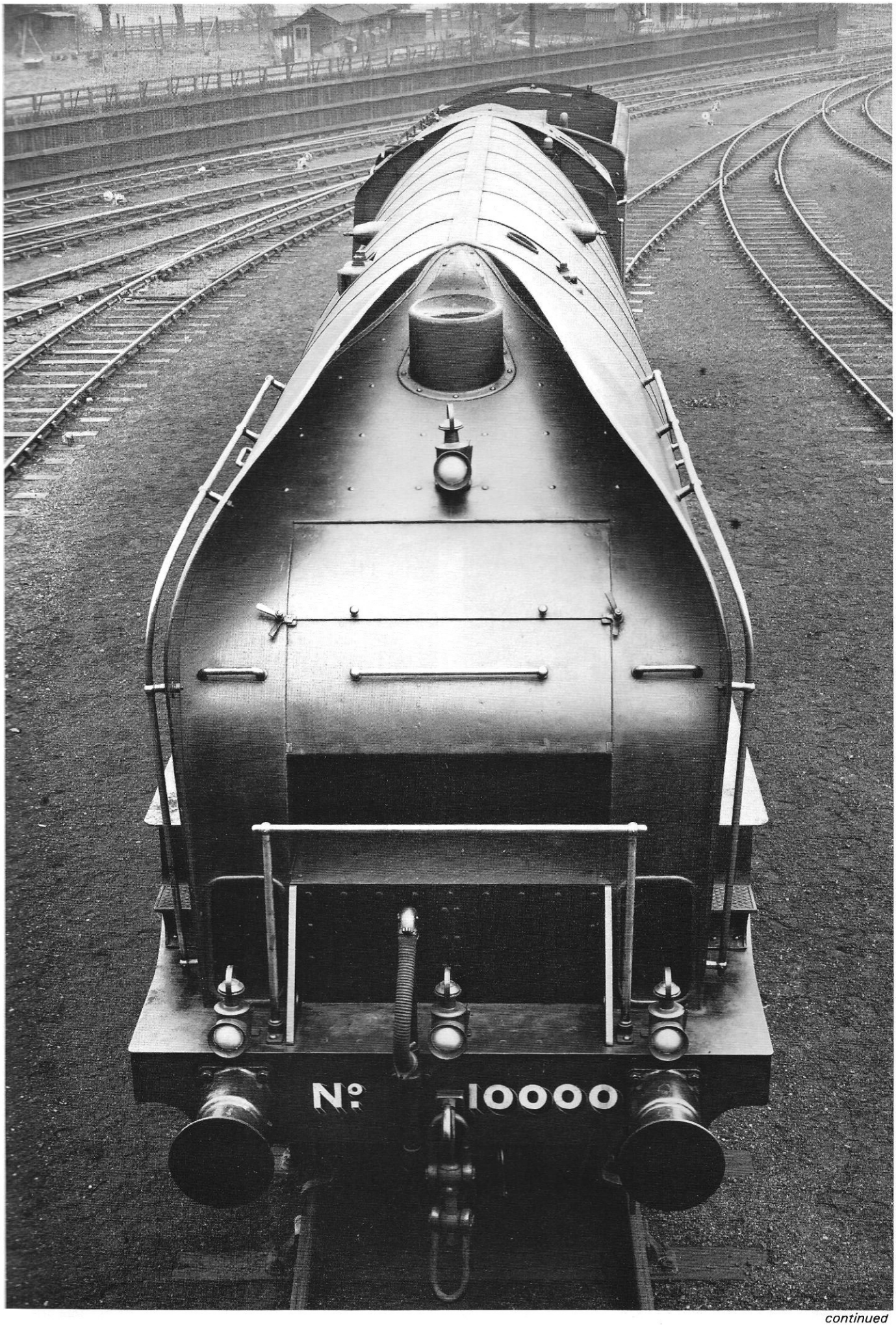


LEFT: The water tube boiler for 10000 at Messrs Yarrow's works, Scotstoun, Glasgow. Job No.1560 painted on stand. Photo: LNER **RIGHT: In April 1929 the frames were sent from Darlington Works to Yarrow's, where the boiler was fitted. This May 1929 view shows the original cylindrical smokebox.** Photo: LNER



LEFT: Gresley had second thoughts about the smokebox design and decided on a sloping top, seen here at Yarrow's c.July 1929. Photo: LNER **RIGHT: The engine, with temporary tender, arrived at Darlington in November 1929 and the first trial took place on 12th December. This view was taken at Darlington North Road station, now a railway museum.** Photo: K. Hoole collection

OPPOSITE: The official photographs of 10000 were released on 10th December 1929. This view was rejected and marked 'not to be used' because of the apparent lip inside the chimney. Photo: LNER



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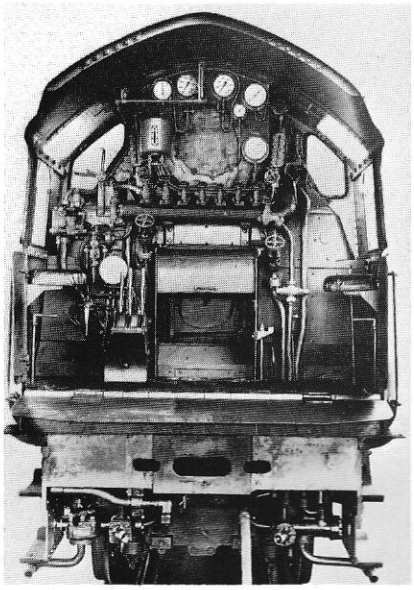
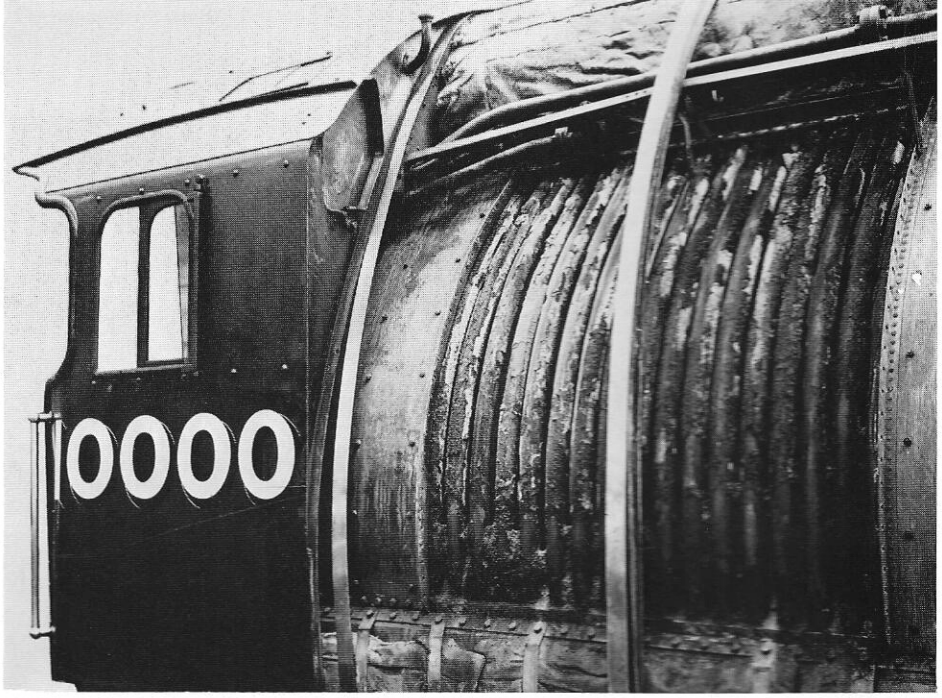


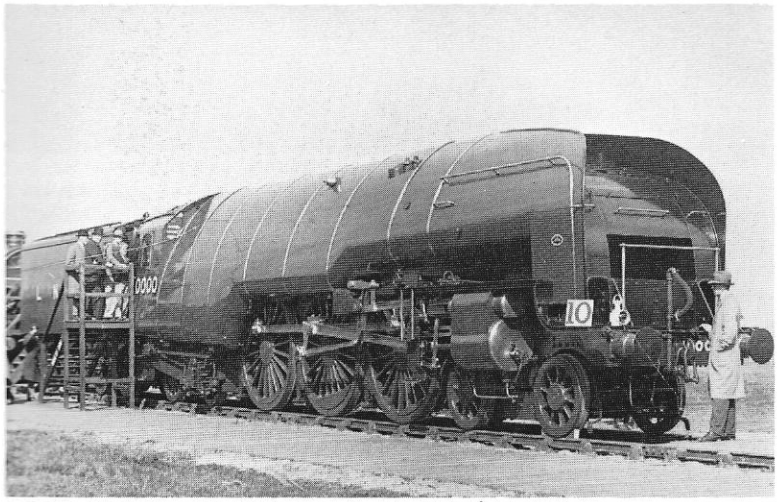


LEFT: Although most fittings and controls were unique to 10000, the NER pattern firehole door cover ('blinder') was fitted. Photo: LNER **RIGHT: On 2nd January 1930 the boiler was opened up to investigate the condition of the water tubes. This is the rear bank of tubes.** Photo: LNER

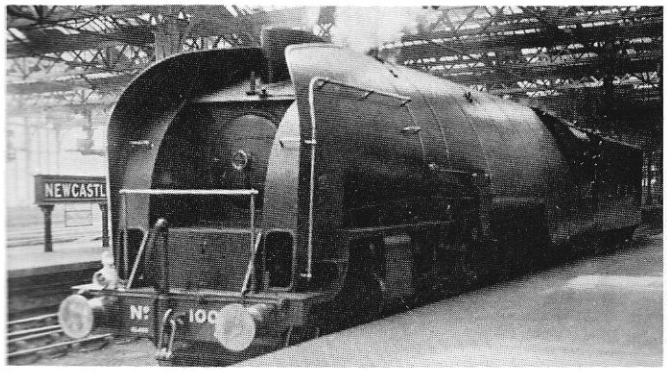
LEFT: On 6th January 1930 10000 worked up to London for a press demonstration at Kings Cross, two days later, when Gresley was photographed in the cab with his daughters Violet and Marjorie. Photo: K. Hoole collection **RIGHT: The special train from Edinburgh to Perth on Sunday 23rd February 1930 stopped three times on the Forth Bridge for photographs to be taken. Consequently, arrival at Perth was 27 minutes late.** Photo: LNER

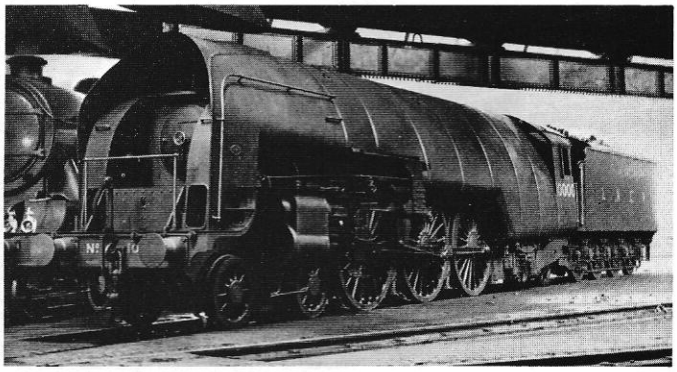
10000 arriving at Darlington on an up east coast train, 26th June 1930. By this date, it had been fitted with electric headlamps, with sockets at each position so that the correct code could be displayed. Four ordinary headlamps were sent from Darlington Works to Messrs J. Stone's works for conversion to electric operation, and all arrived with their glasses broken! Photo: W. Rogerson

On 31st July 1930 the engine worked the up non-stop Flying Scotsman and returned on the down non-stop the following day. This view shows the down train passing Greenwood box, between New Barnet and Hadley Wood. Photo: A. L. P. Reavil



LEFT: 10000 spent much of its time at exhibitions, including the Liverpool & Manchester Centenary display at Wavertree Park, Liverpool, in September 1930. Photo: K. Hoole collection **RIGHT: An unusual combination of 10000 + dynamometer car + counter-pressure locomotive 756 at Ripon, 23rd August 1934.** Photo: J. W. Hague





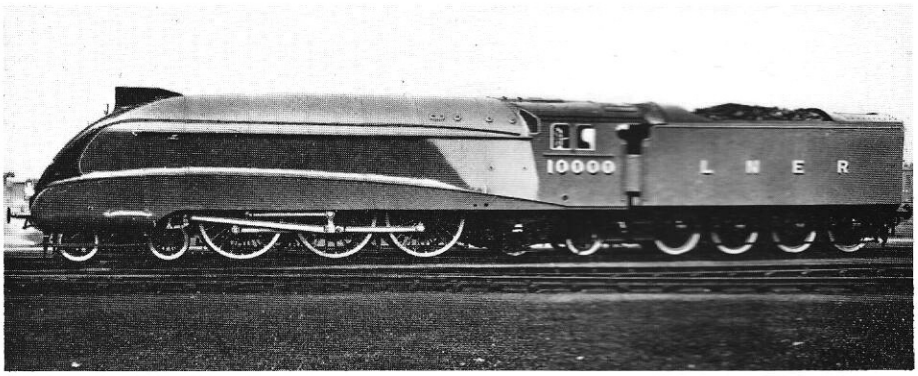
LEFT: In November 1931 the plates covering the smokebox door were removed, and on 10th May 1935 the engine was turned out from Darlington Works newly fitted with double blast pipe and chimney and on the following two days was on display at Leeds. On the Saturday of that week it was photographed in Newcastle Central station by W. B. Greenfield. **RIGHT: 10000 was back at Darlington 22nd-29th May 1935 and again on 14th June when it underwent modifications to the front end 'to ensure better smoke clearance etc'. This consisted of a cowl joining the two arms of the side-sheets.** Photo: K. Hoole collection

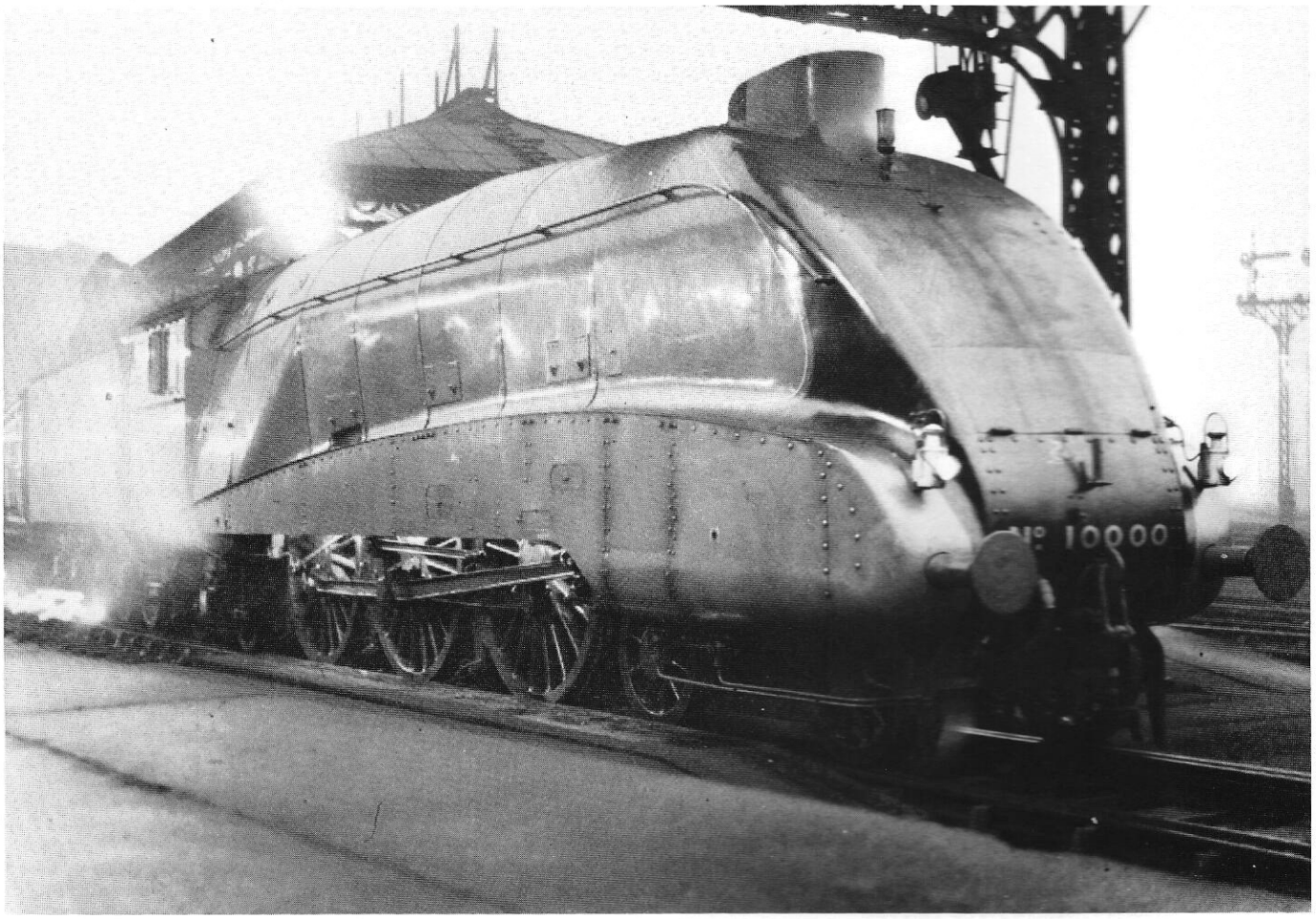
continued

LEFT: After standing from 21st August 1935 to 13th October 1936 the engine was sent from Darlington to Doncaster to await a decision regarding its future. When it was decided to fit it with a normal locomotive type boiler its water tube boiler was moved to Stooperdale Boiler Shop at Darlington Works, seen here while being installed, with the rear steam drum and water tubes just visible.

RIGHT: 10000 in its final form at Doncaster Works. Photo: Photomatic Ltd

BELOW: For some years, it was fitted with lamps to illuminate the driving wheels after dark. Power came from the generator fitted for the electric headlights. The lamps are lit in this 1938 view taken at Newcastle Central Station. Photo: R. E. M. Kirkbright □





YESTERDAY'S OBSERVER

JULY 1946

Enter Peppercorn of the LNER, the GWR County 4-6-0s and major plans for London, as recorded in the pages of the RCTS journal 'Railway Observer'

LMS

DETAIL ALTERATIONS. 6222 was noted at Rugby on 30th May 1946, with the streamline casing removed. It is now painted black lined out with red and yellow bands and LMS on the tender. It is fitted with smoke deflectors.

Four Pacifics have now had the streamline casing removed: 6221/2/4/35. All are painted black, 6221/35 unlined and 6222/4 lined out as above.

MONTROSE. When working the 7.15 am Montrose-Brechin train CR 0-4-4T 15200 (29D) collided with a lorry, and petrol from the wrecked vehicle caught fire. The engine was undamaged, but the paintwork was ruined and four styles of numerals are visible; the large figures on the tank with red and black livery, and the large and small shaded numerals on the bunker.

LNER

CHIEF MECHANICAL ENGINEER. Mr A. H. Peppercorn, Assistant Chief Mechanical Engineer, has been appointed to the post of Chief Mechanical Engineer in succession to Mr Edward Thompson, who retired on 30th June.

CLASS A2. No.500 was named *Edward Thompson* at Marylebone on 31st May 1946. It had a brief spell at Gateshead and was then transferred to the GN section.

CENTENARY OF THE NORTH BRITISH RAILWAY. The centenary of the opening of the Edinburgh-Berwick line, with a branch to Haddington, the first to be built by the North British Railway, fell on the 18th June. This railway, which was the first to cross the border from Scotland into England, was the Scottish link which joined two years later with the York, Newcastle and Berwick Railway to complete the through East Coast route between Edinburgh and London. To mark the occasion the LNER arranged a public exhibition in the Waverley Station, Edinburgh, on 19th and 20th June. The exhibits included Stirling No.1 and the NBR horse-drawn "Dandy" coach first used in 1861, A2/2 2001 *Cock o' the North* (green livery, lined out), B1 1048 (black, red lining), A4 14 *Silver Link* (garter blue, red wheels, chromium numerals), A1 4470 *Great Northern* (Royal blue), L1 9000 (green, lined out), Diesel shunter 8000, and a number of examples of modern coaching stock.

GWR

DETAIL ALTERATIONS. It is understood that the "County" class 4-6-0s have proved rough riding locomotives owing to their extremely heavy outside connecting rods. To overcome this 1005 has been rebalanced and was due to run from 24th-29th June on the 12.00 noon Bristol-Paddington for tests. While in shops 1005 was named *County of Devon.* If the tests are satisfactory the others will probably be so altered.

NEW GWR SHIPS. The keels of two new 3,000 ton cross channel passenger and cargo ships for the GWR were laid in April. They will be built at Birkenhead, and are designed with a rudder in the bow as well as the stern to facilitate manoeuvring in confined space on the Irish or English Channel services. The ships, which will have an overall length of 320 feet and a beam of 48 feet, will be constructed with a raked stem and a cruiser stern, have a speed of 21 knots and each accommodate 1,300 passengers, 50 motor cars and 350 tons of freight. The ships will be steam driven but much of the auxiliary machinery will be electrically operated. The two new ships are to replace the ss *St Patrick* and the ss *St Andrew,* lost during the war, and are expected to be in service in about 15 months time.

SR

On 31st May 1946 201 on loan from Plymouth, was the only loco available at Wadebridge for the Bodmin-Padstow trains, as the other two 02s were away, 181 at Eastleigh and 203 at Exmouth Junction. The three 'Well' tanks were all in evidence, 3314 was dead in the shed, 3329 station pilot and 3298 on the Wenford Bridge trip. It was anticipated that owing to the absence of the 02s, it would probably be necessary to use a 'Well' tank in passenger work during the next few days.

Other Railways

RAVENGLASS AND ESKDALE RAILWAY. From the published timetables it appears that there are two trains in each direction on Mondays to Fridays and Sundays with three on Saturdays.

FESTINIOG RAILWAY. Although open for freight traffic the passenger service is still suspended but it is hoped to resume this next year.

JERSEY RAILWAYS. By the time these notes are published there will once again be no railways in Jersey. After their occupation on 1st July 1940 the Germans laid a metre gauge line round the western side of the Island to serve an underground hospital and for the transport of granite from the quarries to the coastal fortifications. The rolling stock consisted mainly of four wheel flat trucks and two Paris built locomotives, an 0-6-0T and 2-6-0T. The engines will be taken back to France shortly. From St Helier Harbour eastwards round the Island is a 1'11½" gauge line of the contractors type, the motive power on this being an 0-4-0 diesel locomotive. This line is also being dismantled by German prisoners. The last pre war line from St Helier to Corbiere was closed about ten years ago.

AUSTERITY LOCOMOTIVES. Surplus WD 2-8-0 locos are being brought from France to England on the train ferry steamers. As the dock at Dunkirk is no longer in operation, the engines have to be hoisted aboard by means of the special gantry erected over the stern of each steamer. Engines are run off at Dover in the normal manner. Generally they come over with their motion taken down, and often with their coupling rods removed as well, and they are separated from their tenders for the sea voyage. At Dover the tenders are replaced (so that on occasions a loco gets the wrong tender) and they are then towed off in threes or fours to dumps, to await disposal. A small SR 0-6-0T, generally 1556, can often be seen removing these engines from the ferry. Two or three 2-8-0s are kept at Dover Shed, SR, for the job of towing the disconnected engines away, but as this is a WD duty, these engines are not amongst those allocated to the SR; 79203/10, 79232, 79309 have been seen on this duty. On 20th May 1946 there were 14 'dead' 2-8-0s at Dover Marine, Ferry Dock sidings.

One of the dumps mentioned above, visible from Ramsgate or Minster to Deal trains, is at the WD sidings at Stonor, near Richborough. Here on six sidings are 110 engines. They are all marked 'reject' and will presumably be overhauled at Woolwich Arsenal or other similar works in due course.

General

LONDON RAILWAY PLAN. Twelve new lines across Central London are recommended. The first two routes can be cited as examples and the intermediate stations are given:—

Route 1. From SR (Central Section via Forest Hill) — New Cross Gate, Tower Bridge Road, Fenchurch Street, Moorgate, thence via Northern City Line (already of main line dimensions) to Drayton Park, there forking to Finsbury Park-for LNER (GN) to Alexandra Palace, and to Seven Sisters-for LNER (GE) to Enfield Town.

Route 2. From SR (Central Section Tulse Hill) — South Bermondsey, Tower Bridge Road, Bank, Holborn Viaduct, Holborn, Euston, South Hampstead — for LMS to Watford.

Other routes are planned on similar lines and a new freight route from Loughborough Junction to Farringdon is included. For SR (Central & Eastern Section) long distance services, a new terminus on the site of Waterloo Junction is recommended to replace the termini which would be removed.

The total costs estimated on post war figures are £229-236 million and the plan is divided into priorities. The period required for construction under the most favourable conditions would not be less than 30 years.

LMS ELECTRIC TRACTION. Work will shortly commence on the construction at Hall Road, Liverpool, of a new Control Room which will control the flow of power throughout the 37 miles of LMS electrified lines in the Liverpool, Southport and Ormskirk district which in conjunction with the provision of new rolling stock places the Liverpool and Southport electrified lines in the forefront of the world's electric traction systems. □

LETTERS

DISUSED TUNNELS IN SUSSEX

As a regular reader I am interested in some of the more obscure articles, particularly that by Peter Hay (Disused Tunnels in Sussex, Spring 1988 issue) and his suggestion that others should explore such locations. My current employment is with Anglian Water as Senior Resident Engineer in Essex and this involves entry into tunnels, shafts and other confined spaces. It is obvious that Mr Hay is unaware of the lethal danger of gas in such locations.

Acid rain percolating through chalk or limestone will give off carbon dioxide gas. This is colourless and displaces oxygen and a man in such an atmosphere will become unconscious and suffocate. The other possible danger is methane which can asphyxiate or explode due to a spark from a boot or torch. If I am required to enter such a location at work I have to follow these legally enforceable procedures:

1) Open both ends of the tunnel and give adequate ventilation.
2) Do not enter without a gas detector which must be carried on your person. Test the air first.
3) Carry a compressed air 'Savaset' with mask which may be worn if gas is present, giving 15 minutes of fresh air to make good your escape.

Rudgwick tunnel has a concrete ventilation shaft which was installed as a condition to allow the contractor to fill the old cutting with spoil. At Heathfield, methane was actually collected and used to light the station. In view of the fact that many of the tunnels were sealed at both ends and run through chalk, Mr Hay is to date a lucky man. I would not enter any tunnel or shaft without serious consideration and planning. Too many people have been needlessly killed in my industry by gas.

A. D. M. Henderson MICE

Peter Hay states in his article that the whole length of West Dean tunnel has been concreted over, but he doesn't know why. Well, I can enlighten him. After the line's closure, the tunnel was found to be damp and a local firm used it for growing mushrooms, hence the concrete floor and whitewash. Cocking tunnel was on a steep gradient and became choked with smoke and fumes; it was not unknown for drivers and firemen to climb onto the bottom cab steps and bring the train through the tunnel like that. One driver who did not follow this procedure collapsed on the footplate. Midhurst tunnel, as Peter states, is closed at both ends. It is a pity Peter was unable to find the other end; if he had, he would have seen the LBSCR coat of arms and date of building now built into a flower bed close to the tunnel entrance near the flats built on the site of the old station.

Melvin Lovell, Haslemere

As a railway enthusiast and preservationist (a Director of the Maunsell Locomotive Society) and a member of the Sussex Bat Group, I was both intrigued and alarmed by Peter Hay's article on disused railway tunnels. My alarm stemmed from the fact that Peter seemed to be encouraging acts of trespass which might lead to the disturbance of bats in a newfound safe haven. All tunnels still have an owner (usually BR) and access should be by prior consent of the owner unless a legal right of way exists, otherwise entry is a trespass, and the offence is compounded if gates or fences are damaged in order to gain entry! As Peter points out, all species of bats in the UK are protected under the Wildlife and Countryside Act of 1981 and it is an offence to handle, disturb or photograph roosting bats unless licensed to do so.

Bat numbers have declined seriously in recent years, largely due to man's interference with their habitat. In railway preservation we have been lucky — unfortunately there will be no Barry for bats. With respect and forethought however, potential tunnel explorers should be able to enjoy their hobby without it being at the expense of bats.

John Ambler, Horsham

Peter Hay replies:

I take this opportunity to repeat John Ambler's injunction: you must not disturb bats in any way, even by photographing them. Equally you must not damage any property including gates and fences in any aspect of abandoned railway exploration, including tunnels.

Regarding Mr Henderson's comments, most of the tunnels I've been in had a howling gale blowing through them and the danger seemed to be more from pneumonia than gas. I may say that the symptoms of carbon dioxide gas 'pollution' are that you seem to be out of breath all the time, so if that should happen to you, you know the cause. As CO2 is heavier than air, there should be no build-up in any tunnel that has at least one end open, unless that end is obstructed by a wall or bank which is continuous across the mouth and at least 4ft high, allowing the gas to accumulate behind it. In general railway tunnels are of large cross section and there is a free movement of diffusion of air, unlike the situation in a mine adit, or a shaft which is even more dangerous.

LICKEY BANKER

Further to my article on the above featured in Vol.1 No.3, some additional details have come to light. The official building cost was £8,458, (engine £7,209, tender £1,249). The two boilers were externally distinguishable. The original, No.5395, had washout doors only along the top of the 'shoulders' of the Belpaire firebox, whereas the 1922-built spare, No.4886, had a prominent row of washout *plugs* on each side. For some reason most photographs show the engine with boiler No.5395, with which it was ultimately broken up. Although the two boilers were normally exchanged about once each year, in 1944, although it began and ended carrying No.5395, from early February to mid-December the engine bore No.4886.

C. P. Atkins, York

BANBURY-KINGHAM BRANCH

The excellent photograph of the northbound 'Ports to Ports' (p11) passing Hook Norton was taken earlier than 1920. The Railway Signal Company cabin was replaced by a standard GW type 27C on 8th February 1907. Some of the wooden fencing shown in the photograph would have been demolished to accommodate it. The date of the photo is narrowed down by reason of the 'Ports' being introduced on 1st May 1906. A high priority was given to seeing that it had a clear road.

In 1928 there were three local trains each way, a half of which would seem to have been through trains. The wait at Kingham varied, however, from 6 minutes to 1 hour 11 minutes. There was also the 'Ports' but this, of course, did not serve all stations, particularly Kingham. In the last timetable prior to closure a change was necessary on all trains at Kingham.

J. F. Burrell, Bristol

A few years ago I delved into the archives to trace the closure dates for the Banbury-Kingham line. The Kingham avoiding line (Kingham East Jcn to Kingham West Jcn) was severed as a through route on 12th October 1953, but was retained for engine turning until c1960. A landslide between Hook Norton and Great Rollright Siding during September 1958 split the line into two, with working either side up to these points.

Chipping Norton to Great Rollright Siding was closed on 3rd December 1962. Adderbury to Hook Norton saw its last trains on 4th November 1963. Chipping Norton to Kingham ended on 7th September 1964 and, lastly, Kings Sutton to Adderbury on 18th August 1969.

Paul Lefevre, Oakham, Rutland

TOO MANY LOCOS (AGAIN)

I regret that I shall *not* be renewing by subscription. The quality of the magazine is first class and I have found some of the articles most interesting but it has not fulfilled my expectations when it was launched. I had been looking for much more about the history of railways — their construction and the early companies. It is disappointing to find a preponderence of features and photographs devoted to locos which can be found in other railway magazines.

C. W. Mason, Kettering

HAWKHURST BRANCH

May I draw your attention to a misprint on p161 of the Winter 1987 issue? SER carriage sets were used on this branch initially, joined in the days of the SE&LCD Railways Managing Committee by the odd LCDR non bogie coach. I would also challenge Peter Erwood's letter in the Spring 1988 issue. The first H Class 0-4-4Ts to be fitted for pull and push working were not so fitted until 1949. Mr Erwood's footplate ride in 1937 would have been on one of the not dissimilar R or R1 Class 0-4-4Ts.

R. C. Riley, Beckenham

Peter Erwood replies:

Mr Riley is quite right. My notes were lost in the war, but I do seem to recall the characteristic 'H' cab. I am told that some R/R1 carried these. Can anyone support this?

THOMAS EDMONDSON

With reference to the article on railway tickets, I am pleased to say that the South Tynedale Railway is helping to give Thomas Edmondson the recognition he deserves by naming a 2ft gauge steam locomotive after him. Apparently, British Rail declined a proposal by the Transport Ticket Society to name a main line loco after him but the STR responded positively in view of Edmondson's connection with the area — his invention being made while he was employed by the Newcastle & Carlisle Railway. The Henschel 0-6-0WT No.6 was named on 23rd August 1987 and its nameplates incorporate ticket emblems. It is in operation on summer weekends on 1½ miles of the former Alston branch.

Philip Champion, STRPS, Durham

SERIOUS BOOBS

I am writing to point out a Freudian slip that appears to have been made in the article 'A Survey of Railway Tickets' (Spring 1988). I watched the 'First of the Summer Wine' on BBC this Monday night in which the lads lusted after a corset catalogue. I am retired now and cannot recall having done that myself; however, I feel pretty sure that the corset manufacturer mentioned on page 18 should be TWILFIT, obviously a play on the fact that the garment fitted well. Personally, I feel that TWILIFT, as given by the article, is a more suitable name for a bra.

M. Lawson Finch, Seaford

Cyril Bracegirdle replies:

I confirm 'Twilfit' as the correct spelling. The figure for number of tickets being cleared each week in the 1850s by the Railway Clearing House (top p19) has also been queried. Maurice I. Bray in his book *Railway Tickets* gives 12,000 per week in 1851, but *The Railway Clearing House* by Philip Bagwell gives 13 million clearances for 1845, or some 200,000 per week. Mr Bagwell was working from CH records, so we should accept his figures. □

CHARLBURY, GWR

A classic GW country station, opened by the Oxford, Worcester & Wolverhampton Railway in 1853. The Brunel 'chalet' type station building has a shallow, hipped roof projecting enough to save the cost of a separate canopy, and simple arched windows. Most 'chalets' were of brick, but the OWW chose wood to save money. After some false starts in the 1970s (and a furore caused by a proposal to replace its open fire) the station building has today been sympathetically restored and is Grade II listed. This November 1969 view, however, shows it in near-original condition. Photo: Roy Hobbs

E3038

Crewe District Electric Depot, on the 'Western AC Lines', 12th August 1960. This GEC/NBL 3300hp BoBo Class A44 entered service that June, at which date there were exactly 100 electric locos in BR stock — 74 LMR, 24 SR, 2 NER. This class, 10-strong and built 1960-61, had a high failure rate, temperamental mercury-arc rectifiers being only partially cured by costly modifications. E3038 (later 84003) was the third to be built, and passed into departmental stock in October 1980, the class's last year in regular service. Photo: Martin Welch

REVIEWS

OUR RATINGS

★★★★★ Excellent
★★★★ Very good
★★★ Good
★★ Fair
★ Poor

THE POWER OF THE B17s AND B2s

By Peter Swinger. Oxford Publishing Company, Sparkford, Nr Yeovil, Somerset BA22 7JJ. Hardback, 128pp, £11.95.

No publisher made a greater contribution to the modern development of railway book publishing than OPC in its original Judge/Kennedy guise. Since that team sold out in 1982, the imprint has changed hands twice more. No firm (least of all one founded on personal enthusiasms) can stand such rough handling without damage, and in the last two or three years, while it has shown itself still capable of producing books of a high standard, OPC's reputation has suffered. And in the same period the market itself has changed. Standards have improved considerably, competition has increased and, above all, the enthusiast is now more selective and more demanding, eschewing the familiar in a search for the fresh and stimulating. Railway publishing is at a crossroads and book sales, generally, are declining. Where does the 'new' OPC, now the property of the Haynes Group (best known for their motor car books), fit into this picture?

Mr Swinger's book perpetuates the 'Power' series which illustrates in black and white every member of a locomotive class, a concept which many will feel had had its day before the original OPC team broke up. The LNER B17/B2 4-6-0s were good looking and effective engines, but scarcely the most popular or best photographed; the author therefore starts with two major disadvantages and far too many of his chosen pictures are of questionable quality. Each loco is portrayed in two or more views, covered by a single caption. The result is not particularly effective and the layout and photo reproduction are not good enough.

OPC's original reputation was built on three simple strengths: flair, first class photo reproduction and excellent value for money. Many enthusiasts will regret that these qualities are absent from this new book, and hope that they are not lost irretrievably. ★ NT

Two well-known OPC series have been taken over by other publishers:

PRIVATE OWNER WAGONS Vol.4

By Bill Hudson. Headstock Publications, 11 Woodlands View, Wombwell, Barnsley S73 0ND. Paperback, 128pp, £7.95.

The author of Vols.1-3 publishes Vol.4 under his own imprint. Each page features a particular design of wagon; over 100, with dimensions, livery and operational details, together with a large photo, usually of good quality. Useful and authoritative reference material, smartly produced and good value. ★★★★ JC

AN ILLUSTRATED HISTORY OF LMS LOCOMOTIVES Vol.4 Absorbed Pre-Group Classes, Midland Division

By Bob Essery & David Jenkinson. Silver Link Publishing, The Coach House, Garstang Road, St Michaels, Lancs PR3 0TG. Hardback, 224pp, £19.95.

Silver Link take over the OPC series on the LMS steam locomotive which is proving indispensable to students of that railway. Indeed, until the RCTS commence their long-awaited series, it is the *only* comprehensive reference source on the subject. Here, Essery and Jenkinson consider the Midland types passing into LMS stock at Grouping, plus engines from the London, Tilbury & Southend and Somerset & Dorset railways. Also included are the Compound and 2P 4-4-0s, 4F standard goods and 3F 0-6-0T, all MR designs perpetuated by the LMS. The text and captions are nicely balanced between technical and operational information, with the authors' usual expertise on liveries well in evidence. The plethora of BR-era views so common in lesser books of this type are correctly rejected in favour of views taken 1923-48; almost without exception, they are loco studies and a few more 'at work' illustrations would have provided welcome contrast. In all, however, a thorough and important book, and handsome, too, Silver Link having improved greatly on the production quality of the original OPC volumes. ★★★★★ LR

THE NORTH EASTERN ELECTRICS The History of the Tyneside Electric Passenger Services 1904-1967

By Ken Hoole. The Oakwood Press, PO Box 122, Headington, Oxford. Paperback, 80pp, £4.95

Alarmed by the increasing competition of electric tramways, the North Eastern Railway initiated in 1902 a programme of electrification on Tyneside which commenced public service, between New Bridge Street and Benton, in March 1904. The electrified lines — early forerunners of the present-day Metro — were all conversions of existing steam worked routes, but the 90 purpose-built cars and smarter timings retained and attracted passenger traffic from the start. Ken Hoole has already made an unrivalled contribution to our understanding of the important and under-rated NER, and within the confines of a modest volume it is difficult to see how the subject of the Tyneside electrics could have been better handled. Both the mechanical and the social sides of the story are well covered and modellers will find the clear photos and crisply reproduced official drawings of the cars of real value. A second volume, on the NER's electric locomotives, is in preparation. ★★★★★ NT

PULLMAN CARS ON THE SOUTHERN 1875-1972

By R. W. Kidner. The Oakwood Press, address as above. Paperback, 64pp, £4.95.

American-concept Pullman cars commenced work in Britain in 1874 and were tried initially by the MR, GNR and LBSCR. From 1888, however, when the MR contract expired, until 1960 and the advent of the Blue Pullman, the vehicles were most widely used on Southern lines, hence this new book from Oakwood's founder. Separate chapters consider operations by the LBSCR, SER and tentative use by the LSWR. The SR and BR(SR) periods follow and five pages feature the preservation era. Building, naming and numbering details are accompanied by four pages of diagrams and a useful table gives the cars' disposition on all railways over a full century, peak year for use being 1960 with 252 in stock, 119 being on the SR. Workings and train formations are based on personal observation by the author and his contributors. The 60 photos are of good quality and well reproduced on art paper, and eight pages of ephemera complete a useful introduction to this area of Pullman operation. ★★★ JC

MANCHESTER RAILWAY TERMINI

By E. M. Johnson. Foxline Publishing, 69 Yew Tree Drive, Bredbury, Stockport. Paperback, 48pp, £3.95.

This publisher, a professional railwayman, is producing knowledgeable and carefully compiled picture albums on the railway history of major British cities. This is his third, and best, to date. Eleven companies contributed to Manchester's railway development, which commenced with the Liverpool & Manchester in 1830 and reached its zenith in the 1890s. This evolution could have been better described in the rather brief introduction. Manchester was once the only British city, apart from the capital, to boast four termini and it is these, together with their freight depots, that are portrayed here in 123 unfamiliar photos. The author is aware that a district's railway identity is *not* well conveyed by pictures of moving trains and has sought out yards, signalling, staff, architecture, road transport and the like. The historical range is well balanced, and lengthy captions, three maps, timetables and ephemera all add to the value of the book. ★★★★ LR

THE HISTORY OF THE SOUTHERN RAILWAY

By Michael R. Bonavia. Unwin Hyman Ltd, 37-39 Queen Elizabeth Street, London SE1 2QB. Hardback, 195pp, £14.95.

While there is no shortage of railway writers researching branch lines, very few seem willing to take on the much more daunting task of chronicling our major railway companies, and conspicuous gaps in their recorded history persist. This new concise introduction to what has long been (in enthusiasts' terms) the 'Cinderella' of the Big Four is therefore welcome, and augments Dendy Marshall's exhaustive 1936 volume on the SR's formative years. Michael Bonavia writes with the professional railwayman's authority and covers succinctly the major elements in the SR's 25 year history, with particular reference to electrification, shipping and docks, in all of which the Southern was an innovator. The dominant roles of Sir Herbert Walker and O. V. Bulleid are emphasised. Appendices feature 'facts and figures' and there are 32 pages of well-chosen (but poorly captioned) photos. This is a useful and readable introduction to the Southern, but its comparatively high price will limit its appeal. A cheaper paperback edition would probably be very successful. ★★★ LR

GREAT NORTHERN LOCOMOTIVE HISTORY Vol.2 1867-95 The Stirling Era

By N. Groves. The Railway Correspondence & Travel Society, Hazelhurst, Tiverton Road, Bampton, Devon EX16 9LJ. Hardback, 311pp, £13.95 inc post.

The second in the RCTS trilogy chronicles the Stirling era, during which 711 engines were constructed and Doncaster consolidated its reputation for engineering excellence. Stirling is, of course, best remembered for his Singles, but his humbler four-coupled passenger tanks, 0-4-2 mixed traffic tender engines and 0-6-0 workhorses are treated here with equal care. There are 237 photos but, regrettably, no index. In 1942 Edward Thompson ordered the destruction of the Doncaster records relating to the Stirling period and Mr Groves and his associates have largely rectified this curious act of vandalism with long hours spent in the PRO and NRM. The result is a worthy record of the GN's most important era. ★★★★ JC

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FRONT COVER: The LMS image. Royal Scot 46148 *The Manchester Regiment* **waits for the road at Birmingham New Street on 11th April 1962. This engine was something of a maverick, being allocated to a dozen different sheds between January 1957 and withdrawal in November 1964.** Photo: Peter Fitton

BACK COVER: Train in the landscape. Machynlleth station on 20th August 1966 with the Pwllheli-Paddington approaching, hauled by Standard Four 4-6-0 75002. The railway arrived here from Newtown in 1863, was absorbed by the Cambrian the following year and became part of the GWR empire in 1922. Up until 1948 the 2' 3" gauge Corris Railway, running from Aberllefeni, terminated at Machynlleth; its exchange sidings were just out of picture, right, as was the three-road standard gauge MPD, home in 1966 to 75002. The extra goods accommodation, foreground, was added in 1964 following diversion of freight traffic from the closed Ruabon-Morfa Mawddach line. Photo: J. Spencer Gilkes

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